STIC Search Report

EIC 3600

Scientific and Technical Information Center

To: Examiner Justin Pats Location: KNX 5B07 Art Unit: 3629 Date: Wednesday, January 13, 2010 Case Serial Number: 10/699020	From: Ginger R. DeMille Location: EIC3600 KNX 4B68 Phone: (571) 272-3522 Ginger.demille@uspto.gov

Search Notes

Dear Examiner Pats:

Please find attached the results of your search for the above-referenced case. The search was conducted using the Business Methods Template Databases on Dialog, ProQuest, and EBSCOHost.

I have listed *potential* references of interest in the first part of the search results. However, please be sure to scan through the entire report. There may be additional references that you might find useful.

If you have any questions about the search, or need a refocus, please do not hesitate to contact me.

Thank you for using the EIC, and we look forward to your next search!

Note: EIC-Searcher identified "potential references of interest" are selected based upon their apparent relevance to the terms/concepts provided in the examiner's search request.

I. Potential References of Interest

A. Dialog

0532290 94-87063
Delrina acquires license to Reach workflow software
Zankowicz, Josef
Business Wire (San Francisco, CA, US) s1 p1
PUBL DATE: 940922
WORD COUNT: 591
DATELINE: San Jose, CA, US

TEXT:

...experience to quickly create sophisticated forms applications with conditional routing and deploy them across their organization using their LAN-based e-mail systems.

With Reach workflow technology, FormFlow users will be able to automate and systematize more sophisticated workflow processes using a simple point and click approach .Workflow tasks can then be managed by viewing tables that show who originated the task, where the task is in the workflow, and what its status is.

Delrina's electronic forms strategy is to help companies build upon existing technology investments by allowing: DOS, Windows, Macintosh, and UNIX hardware; the most popular e-mail systems; the most popular desktop/SQL databases; and enterprise information sharing platforms, such as Lotus Notes and Microsoft Exchange; to be combined in forms-based applications.

With the rapid adoption of distributed LAN-based computing...

04393837
E/(A1) Project management for complex construction projects by monitoring
  subcontractors in real time
  (B2) Project management for complex construction projects by monitoring
  subcontractors in real time
Inventors: Lewis Stacy (US); Fiely-Fisher Bronwyn (US); Freeman Darlene M
   (US); Halverson Mark (US)
Assignee: (A1) Unassigned Or Assigned To Individual
         (B2) General Electric Capital Corp
Assignee Code: (A1) 68000; (B2) 74493

Probable Assignee (Al): geamericom Communications
Attorney, Agent or Firm: Buckley, Maschoff & Talwalkar LLC

	Publication			Application	
	Number	Kind	Date	Number	Date
	US 20020087381	A1	20020704	US 2000750350	20001229
	US 7031930	B2	20060418	US 2000750350	20001229

(Cited in 003 later patents)
Prior Publication: US 20020087381 A1 20020704
Priority Applic: US 2000750350 20001229
Calculated Expiration: 20201229
Notes: Subject to any Disclaimer, the term of this patent is extended or
    adjusted under 35 USC 154(b) by 858 days.

Abstract: ...in specification or anticipates any other reason that might
delay completion of construction as scheduled, the subcontractor selects
from a computerized menu the appropriate new status for the
subcontractor's task and provides other information relevant to
the changed situation. The status change is displayed on a display
device, an electronic dashboard, so as to be easily noticed, the
dashboard also providing one-click links to a display showing
how widespread are the problems and a display for on-line review and
approval of the status change by a manager or engineer in charge of
the project, who notes the status change on the display and with
whatever input may be provided by the other persons notified of the
status change, decides the best course of action to keep the
construction on schedule.

15/3,K/20   (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2010 WIPO/Thomson. All rts. reserv.

00733768   **Image available**
GEOMETRIC DATA MANIPULATION
MANIPULATION DE DONNEES GEOMETRIQUES
Patent Applicant/Assignee:
  TPLG TECHNOLOGIES LIMITED, 2 Le Bas Terrace, Leinster Road West,
    Rathmines, Dublin 6, IE, IE (Residence), IE (Nationality), (For all
    designated states except: US)
Patent Applicant/Inventor:
  PETERS Brian, TPLG Technologies Limited, 2 Le Bas Terrace, Leinster Road
    West, Rathmines, Dublin 6, IE, IE (Residence), IE (Nationality),
    (Designated only for: US)
Legal Representative:
  BROPHY David, F.R. Kelly & Co., 27 Clyde Road, Ballsbridge, Dublin 4, IE
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200046755 A1 20000810 (WO 0046755)
  Application: WO 2000IE13 20000128 (PCT/WO IE0000013)
  Priority Application: IE 9973 19990202 (IE U)
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB
  GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA

Detailed Description
... and segments which
  are wholly above the current position of the sweep
  line. The other part is those portions which
  temporarily terminate on the sweep line – segments
  which are going to continue through the sweep line.

  (With regard to points, a point on the sweep line which
  is the end of a...1 derived. The
  original salient points are the 4 vertexes of the
  quadrilateral 20' and the 4 vertexes of the
  quadrilateral 21'; the derived salient point is the
  intersection of these quadrilaterals above the sweep
  line 25. (The quadrilaterals have a second
  intersection below the sweep line, but this
  intersection happens to occur at...

...them moved on to the next salient
  point, and the process is repeated. When the sweep
  plane eventually reaches the end of the event point
  schedule and has been processed for that position, the
  process is complete. The derived bodies list will then
  contain 3 bodies 20", 21", and 22, as...

...through them extending on below the
  sweep line) are compared for possible intersections.

  In this case, point pair 27 and 28 do not yield an
  intersection point; pair 28 and 24 yield an
  intersection (point 33, Fig. 4); and point pair 24 and
  29 do not yield an intersection. ...the event point
  schedule.

  Further, the topology manager searches to detect
  whether any elements have become finalized (at this
  stage, finalized elements may be vertexes, line
  segments, or polygons). If so, the topology manager
  enters the finalized elements into the derived bodies
  listing for the plane sweep (i.e. the final derived
  bodies listing), and deletes them as appropriate from
  the sweep status schedule. The sweep plane then moves
  on to its next position. The whole process is then
  repeated, until the sweep plane has passed through all

salient points.

Some complications which do not affect the basic
principles of the system...

...progresses, the topology manager may start to
construct apparently distinct polygons or polyhedra
which later turn out to be parts of a single polygon or
polyhedron. Fig. 8A shows an example, a U-shaped re
entrant polygon. A sweep line passing downwards over
this will initially detect/ two separate polygons 40A...

...be performed.

The salient points for the intersections of each curved
body with other bodies are preferably chosen at the
top-most and bottom-most points of the intersection of
the bodies. However, it may be more convenient to
choose those salient points in some other way, in which
10 case some back-tracking...

01138388   **Image available**
FLEXIBLE WORKFLOW MANAGEMENT
GESTION DU FLUX DE TRAVAIL FLEXIBLE
Patent Applicant/Assignee:
  SAP AKTIENGESELLSCHAFT, Neurottstrasse 16, 69190 Walldorf, DE, DE
    (Residence), DE (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
  SADIQ Shazia, 39 Kaboora Cres., Westlake, QLD 4074, AU, AU (Residence),
    AU (Nationality), (Designated only for: US)
  SADIQ Wasim, 39 Kaboora Cres., Westlake, QLD 4074, AU, AU (Residence), AU
    (Nationality), (Designated only for: US)
  ORLOWSKA Maria E, 5 Boyd Tce, Brookfield, 4069, AU, AU (Residence), AU
    (Nationality), (Designated only for: US)
Legal Representative:
  SCHIUMA Daniele (agent), Muller-Bore & Partner, Grafinger Strasse 2,
    81671 Munchen, DE,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200460038 A2 20040722 (WO 0460038)
  Application: WO 2004EP9 20040102 (PCT/WO EP04000009)
  Priority Application: US 2003438297 20030107; US 2003671876 20030929
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
  DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
  LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO
  RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
  SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

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  (AP) BW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 14868

Fulltext Availability:
  Detailed Description

Detailed Description
...  is a screenshot 900 of a status graph showing a status of the workflow
  600 of FIG. 6. In FIG. 9, a section 902 provides information about
  the process, the instance, and one ?5 or more of the workitem performers
  516. A section 904 provides links to related information, and a
  section 906 shows status information about the worlcflow 600,
  or, more particularly, about the particular instance of the workflow 600.
  A sub-section 908 provides additional user options related to
  status infort-nation, including a button 91 0 for displaying more
  status options and a button 912 for refreshing the section 906.

  The workflow 600 may be displayed in various ways to demonstrate
  its current status, such as which of the included tasks is
  currently active. For example, a color of the corresponding task
  could be changed, or the task could be highlighted or
  otherwise designated on the screen.

  14
  FIG. IO is a screenshot 1 000 for showing work item details for a
  task within the WO 2004/060038 PCT/EP2004/000009 and the fragments
  708-728 of FIG. 7. As already described, the fragments may be combined in
  ...
```

Paste Text Here

[Insert]

B. Additional Resources Searched

No references of interest obtained from additional resources searched.

II. Inventor Search Results from Dialog

No inventor papers of interest found.

III. Text Search Results from Dialog

A. Full-Text NPL & Foreign Patent Databases

```
? show files;ds
File  15:ABI/Inform(R) 1971-2010/Jan 07
       (c) 2010 ProQuest Info&Learning
File  16:Gale Group PROMT(R) 1990-2010/Jan 08
       (c) 2010 Gale/Cengage
File 148:Gale Group Trade & Industry DB 1976-2010/Jan 08
       (c) 2010 Gale/Cengage
File 160:Gale Group PROMT(R) 1972-1989
       (c) 1999 The Gale Group
File 275:Gale Group Computer DB(TM) 1983-2010/Dec 03
       (c) 2010 Gale/Cengage
File 621:Gale Group New Prod.Annou.(R) 1985-2010/Nov 25
       (c) 2010 Gale/Cengage
File   9:Business & Industry(R) Jul/1994-2010/Jan 07
       (c) 2010 Gale/Cengage
File  20:Dialog Global Reporter 1997-2010/Jan 06
       (c) 2010 Dialog
File 610:Business Wire 1999-2010/Jan 08
       (c) 2010 Business Wire.
File 613:PR Newswire 1999-2010/Jan 08
       (c) 2010 PR Newswire Association Inc
File  24:CSA Life Sciences Abstracts 1966-2009/Jan
       (c) 2009 CSA.
File 634:San Jose Mercury  Jun 1985-2009/Dec 31
       (c) 2009 San Jose Mercury News
File 636:Gale Group Newsletter DB(TM) 1987-2010/Dec 09
       (c) 2010 Gale/Cengage
File 810:Business Wire 1986-1999/Feb 28
       (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
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       (c) 2010 Gale/Cengage
File  75:TGG Management Contents(R) 86-2010/Dec W4
       (c) 2010 Gale/Cengage
File  95:TEME-Technology & Management 1989-2009/Nov W5
       (c) 2009 FIZ TECHNIK
File 348:EUROPEAN PATENTS 1978-201001
       (c) 2010 European Patent Office
File 349:PCT FULLTEXT 1979-2009/UB=20091231|UT=20091224
       (c) 2010 WIPO/Thomson


Set    Items   Description
S1     69189   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
              PROCESS OR THREAD)(2S)(PYRAMID? OR POLYHEDRON OR POLYGONAL)
S2    511240   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
              PROCESS OR THREAD)(2S)(HIERARCHY OR TIER)
S3    577200   S1 OR S2
S4   3870911   SCHEDULE OR SCHEDULING OR SCHEDULES OR TIMELINE? ? OR TIME-
              ()LINE? ?
S5   1754497   FLOW()LINE? ? OR FLOWLINE? ? OR RAY? ? OR LINE()SEGMENT? ?
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```
S6      739136   NODE OR NODES OR NODAL OR POINT? ?(3N)(CONNECT? OR INTERSE-
                 CTION)
S7         148   LINKED()DATA()STRUCTURE? ?
S8      206575   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
                 PROCESS OR THREAD)(2S)(TREE)
S9         531   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
                 PROCESS OR THREAD)(2S)(QUADTREE)
S10    1182731   MILESTONE? ? OR MILE()STONE? ?
S11     770191   S3 OR S8 OR S9
S12    4918562   S4 OR S10
S13         83   S11(6S)S12(6S)S5(6S)(S6 OR S7)
S14         49   S13 FROM 348,349
S15         28   S14 NOT AY>2003
S16         34   S13 NOT S14
S17          4   S16 NOT PY>2003
S18          3   RD   (unique items)
? t18/3,k/
```

18/3,K/1   (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08519941   Supplier Number: 73241669 (USE FORMAT 7 FOR FULLTEXT)
Streaming and caching: Bandwidth Efficiency Is Top Priority.
Via Satellite, v16, n4, pNA
April 10, 2001
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 5222

...   protocol encapsulators based on null packet optimization (NPO)
technology.
      This feed will be uplinked from Los Angeles by BT Broadcast Services
via its Marina Del Ray teleport to Galaxy X, and then on to 246
nodes located at local TV stations nationwide. From there, the IP
feed is broadcast to homes which have digital tuner-equipped devices. TV
stations simply offer the iBlast content as an integral part of their
19.4 Mbps ATSC DTV broadcasts. Trials are underway in California, Arizona
and Florida. iBlast plans to have signals...

...are using satellite broadcasting for most of our distribution for the
simple reason that it is far better than a T1 network after the 80th
node.
      For its multicast network architecture, iBlast has turned to
U.K.-based NDS Group plc to provide its MediaStorm broadcasting
system as the back end system. Luckett describes a two-tier
data broadcast architecture with applications running atop the Media
Storm.
      "Our goal is to have no wasted bits anywhere on the network. We are
offering a...

...In the near future, homes with 80 GB of storage on their hard drives
will not be uncommon."
      NDS has been improving its Media-Storm data broadcasting
product over the past two years, and Luckett is quite impressed with the
system's robust software architecture, among other things. NDS bases its

...

...content provider management software (CPMS) at the network operations center, the operator and content provider can define the data stream, and oversee all the playout scheduling remotely so that the right content goes to the right node, and then on to the right audience at the right time," says Yorai Feldman, vice president of data broadcasting at NDS.

In other words, the...

```
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S18         3    RD  (unique items)
? t18/3,k/all; t15/3,k/all
```

 18/3,K/1   (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

08519941   Supplier Number: 73241669   (USE FORMAT 7 FOR FULLTEXT)
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oversee all the playout scheduling remotely so that the right content

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right time," says Yorai Feldman, vice president of data broadcasting at
NDS.
    In other words, the...

 18/3,K/2   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2010 Gale/Cengage. All rts. reserv.

01888772   SUPPLIER NUMBER: 17990952   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Novell's future (and yours). (Company Business and Marketing)
Steinke, Steve
LAN Magazine, v11, n2, p67(5)
Feb, 1996
ISSN: 1069-5621   LANGUAGE: English   RECORD TYPE: Fulltext; Abstract
WORD COUNT: 3244   LINE COUNT: 00274

...   to irritate Microsoft) while sapping Novell's attention and burning
up its money.
    It's a journalistic convention to associate these direct-assault
policies with Ray Noorda, Novell's chairman until 1994. But don't
forget that Noorda was the inventor of the concept of "coopetition; which
was certainly a big...

...it arrived. The NDS-capable client for Windows 95--a major development
effort involving a new code base for all 32-bit clients--is on
schedule, and ...the yellow pages for an Internet that includes not
only the public Internet of today, but also a host of private networks and
innumerable network nodes embedded in office machines, industrial
equipment, vehicles, and household appliances.
    NetWare versions preceding NetWare 4.x relied upon a database (the
bindery) located on each server for information about users, volumes,
files, print queues, user memberships in groups, user and group rights,
passwords, and any other aspects of the server. NDS provides a
trans-network hierarchy of these objects, which can be organized in
any arbitrary form--for example, by location or by department.
    Users log on to the network--not...

...have rights. With the appropriate permissions, users anywhere in the
world can access files, applications, or other services as easily as they
can access local data. New users need not be configured for every
server they may ultimately need to access.
    The value of NDS increases as networks become interlinked and...

...Novell has moved to make NDS the GroupWise messaging directory. NDS can
be extended to incorporate such user attributes as job title, supervisor
name, telephone information, and other human resources
characteristics--even photographs--eliminating the need for multiple
standalone databases. Because NetWare security is enabled through NDS, the
directory can provide...

 18/3,K/3   (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2010 Dialog. All rts. reserv.

27260723 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Q3 2002 Cadence Design Systems Financial Results Conference Call - Final -
   Part 1
FAIR DISCLOSURE WIRE
October 15, 2002
JOURNAL CODE: WFDW   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 4530

  (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   Our ability to play the design partner role for our customers is
critical because the requirements for design are changing dramatically.
    At nanometer design, process nodes are 130, 90 or even 65
nanometers, wires are everything. In design of a chip demands a different
approach, one that allows designers to see...

... our new technology and the road map going forward. We're getting very
positive feedback.
    We launched the Encounter System on September 18th, ahead of
schedule , providing a platform that solves the most difficult
nanometer design problems. The success we're experiencing, I think, is an
indicator of a bright future...Officer to talk about the market and what's
happening with customers. PENNY HERSHER, EXECUTIVE VICE PRESIDENT AND CHIEF
MARKETING OFFICER, CADENCE DESIGN SYSTEMS: Thanks, Ray. As Ray
mentioned, Cadence as the most complete technology portfolio in the world.
Let me take you through the highlights of the quarter. First in Digital IC
...

... single data model solved these problems. Within the Cadence Encounter
System, we released the latest upgrades version 2.1 into production in
August, ahead of schedule . This is a fully integrated nanometer
design flow and it's capable of handling 50 million gates hierarchial. We
also institute a new low price...

 15/3,K/1   (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2010 European Patent Office. All rts. reserv.

02483498
Method and system for incrementally moving teeth
Verfahren und System zur inkrementellen Bewegung von Zahnen
Procede et systeme d'accroissement du mouvement des dents
PATENT ASSIGNEE:
  Align Technology, Inc., (8182630), 881 Martin Avenue, Santa Clara, CA
    95050, (US), (Applicant designated States: all)
INVENTOR:
  Chishti, Muhammad, 350 Sharon Park Drive, No. E24 Menlo Park, CA 94025,
    (US)
  Lerios, Apostolos, Quillen 10C Escondido Village, Stanford, CA 94305,
    (US)
  Freyburger, Brian, 1065 Middlefield Road, Palo Alto, CA 94301, (US)
  Wirth, Kelsey, 350 Sharon Park Drive, No. E24 Menlo Park, CA 94025, (US)
  Ridgley, Richard, 1230 Gromwall Court, Los Altos, CA 94024, (US)
LEGAL REPRESENTATIVE:
  Mathys & Squire (101712), 120 Holborn, London EC1N 2SQ, (GB)

...SPECIFICATION herein incorporated by reference.
   The algorithm is centered around a recursive subdivision of the space
occupied by an object, which is organized in a binary-tree like
fashion. Triangles are used to represent the teeth in the DDS. Each
node of the tree is referred to as an oriented bounding box
(OBB) and contains a subset of triangles appearing in the node's
parent. The children of a parent node contain between them all of
the triangle data stored in the parent node.
   The bounding box of a node is oriented so it tightly fits around
all of the triangles in that node. Leaf nodes in the
tree ideally contain a single triangle, but can possibly contain
more than one triangle. Detecting collisions between two objects involves
determining if the OBB trees of...

...intersect. <FIGREF IDREF=F0015>Fig. 9A</FIGREF> sets forth a flow chart
depicting a simplified version of a recursive collision test to check if
a node "N1" from a first object intersects with node "N2" of
a second object. If the OBBs of the root nodes of the trees
overlap, the root's children are checked for overlap. The algorithm
proceeds in a recursive fashion until the leaf nodes are reached.
At this point, a robust triangle intersection routine is used
to determine if the triangles at the leaves are involved in a collision.
   The present invention provides several enhancements to the collision...
...This approach stems from the observation that there are parts of the
model which will never be involved in a collision, and consequently the
OBB tree for such parts of the model need not be computed. The OBB
trees are expanded by splitting the internal nodes of the
tree as necessary through the recursive collision determination
algorithm, as depicted in <FIGREF IDREF=F0016>Fig. 9B</FIGREF>.
   In another embodiment of the present invention, the triangles in the
model which are not required for collision data may also be
specifically excluded from consideration when building an OBB tree.

As depicted in <FIGREF IDREF=F0017>Fig. 9C</FIGREF>, additional
information is provided to the collision detection algorithm to specify
objects in motion. Motion may be viewed at two levels. Objects may be
conceptualized as "moving" in a global sense, or they may be
conceptualized as "moving" relative to other objects. The additional
information improves the time taken for the collision detection by
avoiding recomputation of collision information between objects
which are at rest relative to each other since the state of the collision
between such objects does not change.
    The software of...

...use a "movie" feature to automatically animate the movement from initial
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...impacting of teeth below the gumline is a concern. These template models
could, for example, comprise a digitized representation of the patient's
teeth x-rays.
    The software also allows for adding annotations to the datasets which
can comprise text and/or the sequence number of the apparatus. The
annotation is...

 15/3,K/2   (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01667139
System for incrementally moving teeth
System zum inkrementellen Bewegen von Zahnen
Systeme pour deplacer les dents de facon incrementale
PATENT ASSIGNEE:
  Align Technology, Inc., (8182630), 881 Martin Avenue, Santa Clara, CA
    95050, (US), (Proprietor designated states: all)
INVENTOR:
  Chishti, Muhammad, 350 Sharon Park Drive,No.E24 Menlo Park, California
    94025, (US)
  Lerios, Apostolos, Quillen 10C,Esondido Village, Stanford,California
    94305, (US)
  Freyburger, Brian, 1065 Middlefield Road, Palo Alto,California 94301,
    (US)
  Wirth, Kelsey, 350 Sharon Park Drive,No.E24 Menlo Park, California 94025,
    (US)
  Ridgley, Richard, 1230 Gromwall Court, Los Altos,California 94024, (US)
LEGAL REPRESENTATIVE:
  Clark, Jane Anne et al (9244661), Mathys & Squire LLP, 120 HolbornLondon
    EC1N 2SQ, (GB)
PATENT (CC, No, Kind, Date): EP 1369091 A1 031210 (Basic)
                              EP 1369091 B1 091014
APPLICATION (CC, No, Date):   EP 2003012114 980619;
PRIORITY (CC, No, Date): US 50342 P 970620; US 947080 971008
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE

...SPECIFICATION herein incorporated by reference.
    The algorithm is centered around a recursive subdivision of the space
  occupied by an object, which is organized in a binary-tree like
  fashion. Triangles are used to represent the teeth in the DDS. Each
  node of the tree is referred to as an oriented bounding box
  (OBB) and contains a subset of triangles appearing in the node's
  parent. The children of a parent node contain between them all of
  the triangle data stored in the parent node.
    The bounding box of a node is oriented so it tightly fits around
  all of the triangles in that node. Leaf nodes in the
  tree ideally contain a single triangle, but can possibly contain
  more than one triangle. Detecting collisions between two objects involves
  determining if the OBB trees of the objects intersect. Fig. 9A sets forth
  a flow chart depicting a simplified version of a recursive collision test
  to check if a node "N1" from a first object intersects with
  node "N2" of a second object. If the OBBs of the root nodes
  of the trees overlap, the root's children are checked for overlap. The
  algorithm proceeds in a recursive fashion until the leaf nodes are
  reached. At this point, a robust triangle intersection
  routine is used to determine if the triangles at the leaves are involved
  in a collision.
    The present invention provides several enhancements to the collision...

...This approach stems from the observation that there are parts of the
  model which will never be involved in a collision, and consequently the
  OBB tree for such parts of the model need not be computed. The OBB
  trees are expanded by splitting the internal nodes of the
  tree as necessary during the recursive collision determination
  algorithm, as depicted in Fig. 9B.
    In another embodiment of the present invention, the triangles in the
  model which are not required for collision data may also be

specifically excluded from consideration when building an OBB tree.
As depicted in Fig. 9C, additional information is provided to the
collision algorithm to specify objects in motion. Motion may be viewed at
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or they may be conceptualized as "moving" relative to other objects. The
additional information improves the time taken for the collision
detection by avoiding recomputation of collision information
between objects which are at rest relative to each other since the state
of the collision between such objects does not change.
   The software of...

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to target states. This is helpful for visualizing overall component
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   Above it was described that the preferred user interface for component
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three-dimensional GUI is also preferred...

...impacting of teeth below the gumline is a concern. These template models
could, for example, comprise a digitized representation of the patient's
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algorithm, as depicted in <FIGREF IDREF=F0016>Fig. 9B</FIGREF>.
   In another embodiment of the present invention, the triangles in the

model which are not required for collision data may also be
specifically excluded from consideration when building an OBB tree.
As depicted in <FIGREF IDREF=F0017>Fig. 9C</FIGREF>, additional
information is provided to the collision algorithm to specify
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conceptualized as "moving" in a global sense, or they may be
conceptualized as "moving" relative to other objects. The additional
information improves the time taken for the collision detection by
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which are at rest relative to each other since the state of the collision
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...impacting of teeth below the gumline is a concern. These template models
could, for example, comprise a digitized representation of the patient's
teeth x-rays.
   The software also allows for adding annotations to the datasets which
can comprise text and/or the sequence number of the apparatus. The
annotation is...

 15/3,K/3   (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01251033
System and method for rendering using ray tracing
System und Verfahren zur Darstellung mit Strahlverfolgung
Systeme et procede de rendu par pojection de rayon
PATENT ASSIGNEE:
  MITSUBISHI DENKI KABUSHIKI KAISHA, (7281370), 7-3, Marunouchi 2-chome,
    Chiyoda-kuTokyo 100-8310, (JP), (Proprietor designated states: all)
INVENTOR:
  Pfister, Hanspeter, 60 Park Street, Somerville,Massachusetts 02143, (US)
  Kreeger, Kevin A., 115 Randall Avenue, Port Jefferson,New York 11777,
    (US)
  Marks, Joseph W., 61 Dalton Road, Belmont,Massachusetts 02478, (US)
  Shen, Chia, 3 Apache Trail, Arlington,Massachusetts 02474, (US)
LEGAL REPRESENTATIVE:
  Pfenning, Meinig & Partner GbR (100961), Patent- und Rechtsanwalte
    Theresienhohe 13, 80339 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1081655 A2 010307 (Basic)
                              EP 1081655 A3 030813
                              EP 1081655 B1 070207
APPLICATION (CC, No, Date):   EP 2000114885 000712;
PRIORITY (CC, No, Date): US 388338 990901
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS (V7): G06T-015/50; G06T-015/40
INTERNATIONAL CLASSIFICATION (V8 + ATTRIBUTES):

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IPC + Level Value Position Status Version Action Source Office:
  G06T-0015/50    A I F B 20060101 20001219 H EP
  G06T-0015/40    A I L B 20060101 20030625 H EP
ABSTRACT WORD COUNT: 71
NOTE:
  Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text  Language    Update    Word Count
      CLAIMS A  (English)  200110      324
      CLAIMS B  (English)  200706      423
      CLAIMS B   (German)  200706      401
      CLAIMS B   (French)  200706      469
      SPEC A    (English)  200110     4669
      SPEC B    (English)  200706     4718
Total word count - document A              4994
Total word count - document B              6011
Total word count - documents A + B        11005
```

...SPECIFICATION then no information is placed back into the ray queues.
   When a processor element completes processing the current block, i.e.,
there are no more rays on the current block's queue), the processor
element signals the scheduler to select a new block for the PE to
process. The scheduler selects the best block based on the current state
of the ray queues and the current state of the memories according
to the heuristic metric. When all ray queues are empty (for
ray casting), processing is completed and image samples can be
collected for display or printing.

Scheduling Algorithms
   The following scheduling algorithms can be used to select an
order for processing the blocks.

Max Work
   This algorithm schedules the block which, for example, contains
the highest number of rays in its ray queue waiting to be
processed.

Max Loaded Work
   This algorithm examines the blocks loaded into the lowest level of the
memory hierarchy, and thus the closest to the processor elements,
and selects the block with the highest number of rays in its queue.
If all loaded blocks have empty ray queues, i.e., there is no work
to be done, then the Max Work algorithm is used to select the next best
block to schedule, regardless of where in the memory
hierarchy the next best block is currently stored.

Geometric
   This algorithm takes advantage of the fact that the first rays,
i.e., there is no reflection or refraction, rays from either a
light source or a viewing frustum all travel outward from the originating
point. Thus, blocks are processed in order from closest to the ray
originating point 340 to farthest from the ray originating point.
This way, before any block is processed, all the blocks that may send any
rays into that block have already been processed. This way each

block is processed exactly once. Of course, this does not hold for
ray tracing, where spawned rays travel in an almost random
directions with no common originating point. This is why other algorithms
are still needed.

Dependency Graph
   Rather than using the number of rays in the ray queue as a
measure of the best block to process, this method utilizes a
dependency graph. This method takes advantage of interframe coherence
over time. For each frame, a dependency graph is generated. The
dependency graph indicates which blocks send rays to which other
blocks. For a later frame, the viewpoint (or camera angle) has probably
moved only a small amount. Thus, most block used for...

...built from the previous frame as a guide to approximate which blocks
should be processed before which other blocks.
   Figure 5a shows an example of rays 501 cast from a viewpoint 502
through a scheduling grid 503. If there is no early ray
termination, then is is possible for some rays to traverse as many
as five blocks. Figure 5b shows a dependency graph 510. In the graph, the
nodes 511 are blocks, and the directed edges indicate rays
leaving one block and entereing the next. In Figure 5b, it is difficult
to see the flow of rays from block-to-block. Figure 5c shows the
same dependency graph as Figure 5b but the nodes are rearranged so
that all directed edges flow from top to bottom. Here, the optimal order
for processing the blocks is clear.
   For a simple 2D 3x3 scheduling grid with ray casting, it is
easy to draw to a dependency graph and to rearrange it so as to determine
the optimal processing order of the blocks. However, the scheduling
grids for the system 100 can be 3D sampled data of a considerable size.
While this makes it difficult to do a manual analysis, it is still
possibel solve the optimal order computationally.
   In addition, the system according to the invention also supports
ray tracing. Figure 6a shows the same simple 3x3 scheduling
grid 503 for a ray tracing case where an object 600 is located in
the center of the grid and the rays include reflected rays
601. Figure 6c shows that the corresponding dependency graph 610 is less
clear on indicating the order of processing blocks. The dashed edges 611
indicate dependancies due to the secondary reflected rays 601
causing cycles in the graph. In one ordering, primary rays are
processed before reflected rays.
   Figures 7a and 7b shows how temporal coherence is attained. In Figure
7a, a grid 700 is superimposed on a graphical object 701, e.g. a sphere.
Block 702 required for ray tracing are indicated in black. The
rays 702 for a frame at time t0)) are generated from a camera
position 704. At time t1)), the camera position 705 has shifted. A large
...

...will soon be needed.
  Min Work
   This is the logical opposite the Max Work scheduling algorithm. This
algorithm replaces blocks with a small number of rays to be
processed before blocks with a large number of rays.

Dependency Graph
   This uses interframe coherence and the dependency graph built from the

previous frame, in a manner similar to the scheduling algorithm. Although the...

...SPECIFICATION the FIFO buffer, the scheduler, independent of the specific visualization application, tries to move the blocks as close to the PE's as possible.

The data move though the level of the memory in different sized chunks depending on the level. For example, volumetric data for a specific frame can be divided into a hierarchical spatial subdivision. Thus, when volumetric data are needed by a processor element, and the data are only present in the highest level of the memory hierarchy, a large chunk of the volume will be moved to the next lower level, and an even smaller chunk will be moved all the way to the lowest level closest to the processor element.

Initially, the data are stored in the main memory 220. The CPU 210 generates initial ray information and loads the ray queues 320. The dispatcher starts transferring data to the DRAM 206 on the board 230 when the first block is ready to be processed. Blocks can also be loaded directly into the...

...be achieved with a single read from main memory, and simultaneous write to both on-board DRAM and ASIC eDRAM.

As blocks are processed, the ray queues for the current block are read to determine how the ray intersects the sampled and geometry data in the block. When a ray exits the block and enters a next scheduling grid block, this information is placed on an appropriate ray queue for the next block. If the ray has reached full opacity, for ray casting, then no information is placed back into the ray queues.

When a processor element completes processing the current block, i.e., there are no more rays on the current block's queue), the processor element signals the scheduler to select a new block for the PE to process. The scheduler selects the best block based on the current state of the ray queues and the current state of the memories according to the heuristic metric. When all ray queues are empty (for ray casting), processing is completed and image samples can be collected for display or printing.

Scheduling Algorithm

The following scheduling algorithm using a dependency graph is used to select an order for processing the blocks.

This method utilizes a dependency graph as a measure of...

...to process. It takes advantage of interframe coherence over time. For each frame, a dependency graph is generated. The dependency graph indicates which blocks send rays to which other blocks. For a later frame, the viewpoint (or camera angle) has probably moved only a small amount. Thus, most block used for...

...built from the previous frame as a guide to approximate which blocks should be processed before which other blocks.

Figure 5a shows an example of rays 501 cast from a viewpoint 502 through a scheduling grid 503. If there is no early ray termination, then is is possible for some rays to traverse as many as five blocks. Figure 5b shows a dependency graph 510. In the graph, the nodes 511 are blocks, and the directed edges indicate rays

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grids for the system 100 can be 3D sampled data of a considerable size.
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   In addition, the system according to the invention also supports
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Block 702 required for ray tracing are indicated in black. The
rays 702 for a frame at time t0)) are generated from a camera
position 704. At time t1)) , the camera position 705 has shifted. A large
...

01251031
Programmable architecture for visualizing sampled and geometry data
Programmierbarer   Aufbau   zur   Visualisierung   von   Abtastdaten   und
    geometrischen Daten
Structure programmable pour visualiser des donnees echantillonnees et
    geometriques
PATENT ASSIGNEE:
  MITSUBISHI DENKI KABUSHIKI KAISHA, (208589), 2-3, Marunouchi 2-chome,
    Chiyoda-ku, Tokyo 100-8310, (JP), (Proprietor designated states: all)
INVENTOR:
  Pfister, Hanspeter, 60 Park Street, Somerville, Massachusetts 02143, (US)
  Kreeger, Kevin A., 115 Randall Avenue, Port Jefferson, New York 11777,
    (US)
  Marks, Joseph W., 61 Dalton Road, Belmont, Massachusetts 02478, (US)
  Shen, Chia, 3 Apache Trail, Arlington, Massachusetts 02474, (US)
LEGAL REPRESENTATIVE:
  Pfenning, Meinig & Partner (100961), Mozartstrasse 17, 80336 Munchen,
    (DE)
PATENT (CC, No, Kind, Date): EP 1081646 A2 010307 (Basic)
                              EP 1081646 A3 040107
                              EP 1081646 B1 050420
APPLICATION (CC, No, Date):   EP 2000114883 000712;
PRIORITY (CC, No, Date): US 388337 990901
DESIGNATED STATES: DE; FR; GB

...SPECIFICATION then no information is placed back into the ray queues.
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  there are no more rays on the current block's queue), the processor
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  process. The scheduler selects the best block based on the current state
  of the ray queues and the current state of the memories according
  to the heuristic metric. When all ray queues are empty (for
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  and selects the block with the highest number of rays in its queue.
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  ray tracing, where spawned rays travel in an almost random

directions with no common originating point. This is why other algorithms are still needed.

Dependency Graph
   Rather than using the number of rays in the ray queue as a measure of the best block to process, this method utilizes a dependency graph. This method takes advantage of interframe coherence over time. For each frame, a dependency graph is generated. The dependency graph indicates which blocks send rays to which other blocks. For a later frame, the viewpoint (or camera angle) has probably moved only a small amount. Thus, most block used for...

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   This uses interframe coherence and the dependency graph built from the previous frame, in a manner similar to the scheduling algorithm.

Although the...

...SPECIFICATION to 0.65 seconds per operation could quickly add up to
non-interactive frame rates for even a small number of low level tasks.
   Exploiting data coherence by caching is a another well known
technique to increase efficiency in computer graphics, see Sutherland et
al. in "A characterization often hidden surface...

...March 1974. Increasing the coherence of a computation can reduce the
amount of memory used, the time it requires, or both. In systems that use
ray tracing, the coherence of rays traveling through a scene
can be increased by traversed ray trees to process rays
into coherent bundles.
   Similarly, rays with common origins can be gathered into
frustums. This reduces the time to find intersecting objects. Rays
can be reordered using space filling curves over the image plane to
improve the coherence of spawned rays in a depth-first ray
tracer. Monte Carlo ray tracing systems that is designed to improve
coherence across all levels of the memory hierarchy, from processor
caches to disk storage.
   Pharr et al. in "Rendering complex scenes with Memory-Coherent
Ray Tracing," Proceedings of SIGGRAPH 97, pp. 101-108," described a
cached ray tracing system. There, texture tiles, scene geometry,
queued rays, and image samples were stored on disk. Camera
generated rays were partitioned into groups. Groups of rays
were scheduled for processing depending on which parts of the scene was
stored in main memory, and the degree to which processing the rays
would advance the rendering. Scheduled rays were stored in queues
in main memory. Scene geometry was added to main memory as needed. Any
new rays that were generated during the ray tracing were
added to the queues of waiting rays. Essentially, this system can
be characterized as a memory hierarchy with two levels of cache,
disk and main memory, and a single processor. This is basically a
software solution to a caching problem. Also, Pharr...

...a single image at the time, and has coherency algorithm is only
concerned with spatial locality.
   To gain certain advantages, the system was designed to process
only a single type of geometric primitive. "A distinguishing feature of
our ray tracer is that we cache a single type of geometric
primitive: triangles. This has a number of advantages. Ray
intersection tests can be optimized for a single case, and memory
management for the geometry cache is easier, since there is less
variation in the...
...the system for handling large databases of triangles; this allows our
system to efficiently handle a wide variety of common sources of
geometry, including scanned data, scientific data, and
tessellated patches. A potential drawback of this single representation
is that other types of primitives, such as spheres, require more space to
store after...

...this disadvantage" ibid, at p. 102.
   Their geometry cache was organized in what they called "voxel" or
geometry grids to enclose triangles. Note that in ray tracing, the
term "voxel" has a totally different meaning than in volume rendering. In
volume rendering, a voxel is a single sample in a three-dimensional

(volume) data set. To distinguish these totally different meanings,
in the description below, the term "voxel" always means a volume sample,
and the term "block" refers to...

...good level of granularity for caching. However, they also used an
acceleration grid holding a few hundred triangles for finer granularity.
   For the purpose of scheduling blocks to be processed, they
associated a cost value and a benefit value with each block. The cost was
based on the computational complexity of...
...work on by selecting the block with the highest ratio of benefit to
cost.
   Palmer, M.E. et al.: "Exploiting Deep Parallel Memory Hierarchies for
Ray Casting Volume Rendering", Proceedings of the IEEE Symposium on
Parallel Rendering (PRS '97), Phoenix, Oct. 20 - 21, 1997, Proceedings of
the IEEE Symposium on Parallel...

...1997-10-20), pages 15 - 22, 115 - 116, XP000779035 ISBN:1-58113-010-4,
disclose techniques to efficiently exploit all levels of the deep memory
hierarchy of a distributed power challenge array, on which a
logical global address space for volume blocks with caching is
implemented. This optimal exploitation of the entire memory
hierarchy from the processor cache to the interconnection network
between distributed nodes -allows an efficient rendering of a very
large dataset.
   It is desired to render scenes with ray tracing that are
expressed in more than one single graphical primitive such as triangles.
Furthermore, it is desired to gain additional performance improvements by
using a software and hardware cache. In addition, it is desired to
improve block scheduling beyond a simple cost-benefit algorithm. It
is also desired to render a sequence of images or frames, and to provide
temporal coherence in addition...
...provide a programmable hardware architecture to perform complex
visualization tasks.

Summary of the Invention
   It is an object of the invention to provide an improved ray
tracing architecture for both sampled data and geometry data.
The sampled data can be 2D, 3D, or sampled data in higher
dimensions. The geometry data can be polygons, parametric patches,
or analytically defined data. It is another object, to provide a
hierarchical memory with embedded-DRAM technology to achieve real-time
rendering rates. It is a further object, to...

...by an order of magnitude using multiple levels of memory coherency. It
is also an object to provide a programmable visualization engine that
supports segmentation, ray tracing rendering, and other graphical
processes.
   The objects according to the invention are solved by a programmable
visualization apparatus comprising the features of claim 1...

...a dependency graph of the plurality of blocks is provided for
determining the spatial and temporal order of the blocks.
   More particularly, a method traces rays through graphical data.
The graphical data may include sampled and geometry data. The method may
partition the graphical data into a plurality of blocks according to a
scheduling grid. For each block, a ray queue can be

generated. Each entry in the ray queue may represent a ray to
be traced through the block. The ray queues may be ordered
spatially and temporally using the dependency graph. The rays may
be traced through the blocks according to the ordered list.

Brief Description of the Drawings

    Figure 1 is a block diagram of a logical...

...then no information is placed back into the ray queues.
   When a processor element completes processing the current block, i.e.,
there are no more rays on the current block's queue), the processor
element signals the scheduler to select a new block for the PE to
process. The scheduler selects the best block based on the current state
of the ray queues and the current state of the memories according
to the heuristic metric. When all ray queues are empty (for
ray casting), processing is completed and image samples can be
collected for display or printing.
Scheduling Algorithms
   The following scheduling algorithms can be used to select an
order for processing the blocks.

Max Work
   This algorithm schedules the block which, for example, contains
the highest number of rays in its ray queue waiting to be
processed.

Max Loaded Work
   This algorithm examines the blocks loaded into the lowest level of the
memory hierarchy, and thus the closest to the processor elements,
and selects the block with the highest number of rays in its queue.
If all loaded blocks have empty ray queues, i.e., there is no work
to be done, then the Max Work algorithm is used to select the next best
block to schedule, regardless of where in the memory
hierarchy the next best block is currently stored.

Geometric
   This algorithm takes advantage of the fact that the first rays,
i.e., there is no reflection or refraction, rays from either a
light source or a viewing frustum all travel outward from the originating
point. Thus, blocks are processed in order from closest to the ray
originating point 340 to farthest from the ray originating point.
This way, before any block is processed, all the blocks that may send any
rays into that block have already been processed. This way each
block is processed exactly once. Of course, this does not hold for
ray tracing, where spawned rays travel in an almost random
directions with no common originating point. This is why other algorithms
are still needed.

Dependency Graph
   Rather than using the number of rays in the ray queue as a
measure of the best block to process, this method utilizes a
dependency graph. This method takes advantage of interframe coherence
over time. For each frame, a dependency graph is generated. The
dependency graph indicates which blocks send rays to which other
blocks. For a later frame, the viewpoint (or camera angle) has probably

moved only a small amount. Thus, most block used for...

...built from the previous frame as a guide to approximate which blocks
should be processed before which other blocks.
   Figure 5a shows an example of rays 501 cast from a viewpoint 502
through a scheduling grid 503. If there is no early ray
termination, then is is possible for some rays to traverse as many
as five blocks. Figure 5b shows a dependency graph 510. In the graph, the
nodes 511 are blocks, and the directed edges indicate rays
leaving one block and entereing the next. In Figure 5b, it is difficult
to see the flow of rays from block-to-block. Figure 5c shows the
same dependency graph as Figure 5b but the nodes are rearranged so
that all directed edges flow from top to bottom. Here, the optimal order
for processing the blocks is clear.
   For a simple 2D 3x3 scheduling grid with ray casting, it is
easy to draw to a dependancy graph and to rearrange it so as to determine
the optimal procesing order of the blocks. However, the scheduling
grids for the system 100 can be 3D sampled data of a considerable size.
While this makes it difficult to do a manual analysis, it is still
possibel solve the optimal order computationally.
   In addition, the system according to the invention also supports
ray tracing. Figure 6a shows the same simple 3x3 scheduling
grid 503 for a ray tracing case where an object 600 is located in
the center of the grid and the rays include reflected rays
601. Figure 6c shows that the corresponding dependency graph 610 is less
clear on indicating the order of processing blocks. The dashed edges 611
indicate dependancies due to the secondary reflected rays 601
causing cycles in the graph. In one ordering, primary rays are
processed before reflected rays.
   Figures 7a and 7b shows how temporal coherence is attained. In Figure
7a, a grid 700 is superimposed on a graphical object 701, e.g. a sphere.
Block 702 required for ray tracing are generated from a camera
rays 702 for a frame at time t0)) are generated from a camera
position 704. At time t1)), the camera position 705 has shifted. A large
...

...will soon be needed.

  Min Work
   This is the logical opposite the Max Work scheduling algorithm. This
  algorithm replaces blocks with a small number of rays to be
  processed before blocks with a large number of rays.

  Dependency Graph
   This uses interframe coherence and the dependency graph built from the
  previous frame, in a manner similar to the scheduling algorithm.
   Although the...

RECHNERSYSTEM UND VERFAHREN ZUR ERKLARUNG DES VERHALTENS EINES MODELLES DAS
    EINGANGSDATEN AUF AUSGANGDATEN ABBILDET
SYSTEME   ET   PROCEDE INFORMATIQUES SERVANT A EXPLIQUER LE COMPORTEMENT D'UN
    MODELE   FAISANT   CORRESPONDRE   DES   DONNEES D'ENTREE A DES DONNEES DE
    SORTIE
PATENT ASSIGNEE:
  Torrent Systems, Inc., (2919210), Five Cambridge Center, Cambridge, MA
    02142, (US), (Proprietor designated states: all)
INVENTOR:
  PASSERA, Anthony, 4 Washburn Street, Watertown, MA 02172, (US)
LEGAL REPRESENTATIVE:
  Loveless, Ian Mark et al (87731), Reddie & Grose, 16 Theobalds Road,
    London WC1X 8PL, (GB)
PATENT (CC, No, Kind, Date): EP 1090275 A1 010411 (Basic)
                              EP 1090275 B1 030528
                              WO 99067602 991229
APPLICATION (CC, No, Date):   EP 99930554 990622; WO 99US14076 990622
PRIORITY (CC, No, Date): US 102349 980622
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS (V7): G06K-009/62; G06F-017/60; G06N-007/06;
  G05B-013/04
NOTE:
  No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS B   (English) 200322   467
      CLAIMS B   (German)   200322   408
      CLAIMS B   (French)   200322   511
      SPEC B   (English) 200322   3679
Total word count — document A   0
Total word count — document B   5065
Total word count — documents A + B   5065

...SPECIFICATION has been reached. By recursively splitting each subspace,
  each split defined by the data splitting module 16 may be represented by
  a decision tree. Each node of the decision tree stores an
  indication of the dimension which is most salient for the input data and
  the threshold used by the node for splitting the input data into
  subspaces. The decision tree thus hierarchically defines, for each
  subspace of the input space, the dimension and threshold used...

...subspaces also may be performed in parallel and in a pipelined manner,
  as shown in Fig. 3. In particular, the sensitivity analysis module 12 and
  data splitting module 16 of Fig. 1 may be considered a data
  splitter 30 as shown in Fig. 3. The model 11 is not shown in this figure,
  because it may be considered to be used in a preprocessing step to
  generate the partial derivatives from which sensitivity measures are
  computed. A data splitter 30 receives input data 31 and
  generates output subspaces 32 and 33. Additional data splitters 34
  and 36 may be provided to operate in parallel on the output subspaces 32
  and 33 to provide additional subspaces.
    A more detailed block diagram of a data splitting module 16 of
  Fig. 1 in one embodiment will now be described in connection with Fig. 4.

In Fig. 4, the sensitivity measures are used by a dimension selection module 40 to identify a dimension 42 on which the input data set 10 will be split. A threshold 48 is selected by a threshold selection module 46 for the selected dimension 42. This selection may be performed using the input data set 10, for example by identifying the mean, median or mode or other function of the values in that dimension in the input data set. The threshold 48 is input into a comparator 49. Each input datum also is input to the comparator 49 for comparison with the threshold 45. The data output by the multiplexer 47 thus falls into one of two subspaces as specified by the comparator.

The flow chart of Fig. 5 describes in...

...selected based on the sensitivity measures as indicated in step 50. A threshold for the selected dimension is determined in step 52 from the input data set. For each input datum, as indicated in step 54, the value of the selected dimension is compared to the determined threshold in step 56...

...be presented to a user for example by a computer display or printout in a number of formats. By representing the description using a decision tree, each node of the tree may be described using a rule in a first order predicate calculus. The user may traverse the tree and interactively expand or contract each node to view the description for each node of the tree.

A general purpose computer system may be used to implementing the system shown above using a computer program. Such a computer system typically includes a main unit connected to both an output device which displays information to a user and an input device which receives input from a user. The main unit generally includes a processor connected to a memory system...

...interconnection mechanism.

It should be understood that one or more output devices may be connected to the computer system. Example output devices include a cathode ray tube (CRT) display, liquid crystal displays (LCD), printers, communication devices such as a modem, and audio output. It should also be understood that one or...

...input devices may be connected to the computer system. Example input devices include a keyboard, keypad, track ball, mouse, pen and tablet, communication device, and data input devices such as sensors. It should be understood the invention is not limited to the particular input or output devices used in combination with...

...operating system, of which WindowsNT, Linux, UNIX, System 7, DOS, VMS and OS8 are examples, which controls the execution of other computer programs and provides scheduling, debugging, input/output control, accounting, compilation, storage assignment, data management and memory management, and communication control and related services. The processor and operating system define...

15/3,K/6   (Item 6 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01113426
DISTRIBUTED COMPUTING ENVIRONMENT USING REAL-TIME SCHEDULING LOGIC AND TIME
    DETERMINISTIC ARCHITECTURE
VERTEILTE   RECHNERUMGEBUNG   MIT   ECHT-ZEIT   ABLAUFFOLGENLOGIK   UND
    ZEIT-DETERMINISTISCHER ARCHITEKTUR
ENVIRONNEMENT INFORMATIQUE DISTRIBUE A LOGIQUE D'ORDONNANCEMENT EN TEMPS
    REEL ET ARCHITECTURE A DETERMINATION TEMPORELLE
PATENT ASSIGNEE:
  Dow Global Technologies Inc., (4085311), Washington Street, 1790 Building
    , Midland, Michigan 48674, (US), (Proprietor designated states: all)
INVENTOR:
  WOODS, Randy, D., 3788 Old Pine, Midland, MI 48642, (US)
  JACHIM, David M., 2399 Wildwood Trail, Saline, MI 48176, (US)
  DUPREE, Wayne, P., 5301 Stony Creek, Midland, MI 48640, (US)
  VERNIERS, Gerrit, H., Heirweg 88, B-9180 Moerbieke-Waas, (BE)
  CHURCHILL, Stephen, G., 2588 Waskevich, Midland, MI 48642, (US)
  FERNANDEZ, George, P., 449 North 5 Mile, Midland, MI 48640, (US)
LEGAL REPRESENTATIVE:
  Betten & Resch (101032), Patentanwalte Postfach 10 02 51, 80076 Munchen,
    (DE)
PATENT (CC, No, Kind, Date):   EP 1084470 A1   010321 (Basic)
                                EP 1084470 B1   030723
                                WO 99061985 991202
APPLICATION (CC, No, Date):   EP 99914169 990326; WO 99US6634 990326
PRIORITY (CC, No, Date): US 86737 P 980526
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU;
  MC; NL; PT; SE
INTERNATIONAL PATENT CLASS (V7): G06F-009/46
NOTE:
  No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text   Language   Update   Word Count
     CLAIMS B (English) 200330   442
     CLAIMS B   (German) 200330   408
     CLAIMS B   (French) 200330   576
     SPEC B   (English) 200330   13276
Total word count - document A   0
Total word count - document B   14702
Total word count - documents A + B   14702

...SPECIFICATION low cost 1435 are interrelated in an abstracted
  characterization.
    Turning now to Figure 15, the general process 1500 executed respective
  to scheduling in each member node 108, 107 (any one of control
  computer 506, historian computer 507, control computer 504, historian
  computer 505, user interface 503, network support 502, and network switch
  501) is discussed. Each member node 108, 107 is responsible for
  receiving the common clock signal; synchronizing to that common clock
  signal; receiving the local event table 114, 116 from the...

...switch 501.
    Steps 1501 and 1502 - Since the network is so highly dependent on a
  global time base, the first step 1501 at a member node 108, 107 is
  to receive the common clock signal. The clock signal is communicated as a
  message from the master scheduler 106 in network switch 501 to each of

the member nodes 108, 107. The member node 108, 107 receives this clock signal in step 1501, stamps the actual time of reception, and validates the integrity of this message. The validated message...

...optionally determined (optionally if the nature of the time message is a pulse instead of a data bearing message).

Steps 1503 and 1504 — Each member node 108, 107 must now synchronize to the common clock signal. The process of performing this synchronization can be broken up into two separate tasks: first...

...time such that the start of each time period which is defined by the common clock signal occurs at the same time in the member nodes 108, 107 as it does in the master scheduler 106 in network switch 501.

Step 1505 — Once the synchronization of a member node 108, 107 to the master scheduler 106 in network switch 501 is complete, the member node 108, 107 must receive the local event table 114, 116 from the master scheduler 106 in network switch 501. The local event table 114, 116 contains the schedule for the communications which are involving this member node. Note that the reception of the local event table 114, 116 itself is scheduled by the master scheduler 106 in network switch 501. Therefore, the first time that the node is to receive the local event table 114, 116 it must be available to receive that message at any possible time that the local event table 114, 116 might be received.

Step 1506 — The next step for the member node 108, 107 is to formulate the task execution list. The task execution list is formulated from the local event table 114, 116 and the additional tasks which the member node 108, 107 must do which are not described in the local event table 114, 116. The local event table 114, 116 which is communicated from...

...is received from the master scheduler 106 in network switch 501 is relative to the master scheduler 106 in network switch 501. Although the member node 108, 107 is synchronized with the master scheduler 106 in network switch 501, there is still an inherent delay in the propagation through the media being communicated. Either this delay must be accounted for by the master scheduler 106 in network switch 501, the member node, or the communication window of time increment must be sufficiently large that the inherent delay is included as overhead in the time allotted to the connection. In the preferred embodiment, this delay is accounted for in the member node.

Substep 1506B: Schedule the tasks which are dependent on the communication tasks. There are tasks which must be scheduled prior to a transmission (for example, the transfer of...example, the arbitration of the data between the multiple, different sources in a redundant computing environment and the transfer of data to memory). The member node 108,107 is responsible for the scheduling of these tasks.

Substep 1506C: Schedule the tasks which are neither described by the local event table 114, 116 nor are dependent on the communications. There are tasks which the member node 108, 107 must accomplish in addition to communication related tasks. These tasks may be for the operation of other I/O, localized display, etc.

Step 1507 — The next step for the member node 108, 107 is to execute the task execution list. Each task in the list contains the task which is to be executed, the start time for the task, and any parameters which are necessary in order to successfully complete the task.

Step 1508 — The member node 108, 107 can now formulate the

communication request list, which is a list of the member nodes
108, 107 to which this member node 108, 107 is desiring to
communicate. The information which is included in this communication
request list is the source node identifier, destination node
identifier, and the total length of the communication.
    Step 1509 — This communication request list is communicated to the
master scheduler 106 in network switch 501 for consideration in its
scheduling. At this point, the member node 108, 107 has performed
all of the necessary functions in a particular time period. The next step
1510 is to determine whether or not it...

...1501 of receiving the reference moment message. If it is not time to
receive the next reference moment message, then the logic of the member
node may forward to step 1505.
    As one contemplated embodiment, Figure 16 presents the general data
flow diagram 130 of Figure 1 as a data flow...

...to the central processing unit, an optional output display (which can
include, without limitation, a printer, printing terminal where output is
printed on paper, cathode ray tube monitor, and/or flat panel
monitor) connected to the central processing unit, a computer clock pulse
generator, and a connection to electrical power for...

 15/3,K/7   (Item 7 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01019851
METHOD AND SYSTEM FOR INCREMENTALLY MOVING TEETH
VERFAHREN UND SYSTEM FUR AUF INKREMENTALE WEISE BEWEGENDE ZAHNE
PROCEDE ET SYSTEME DE REPOSITIONNEMENT PROGRESSIF DES DENTS
PATENT ASSIGNEE:
  Align Technology, Inc., (2685700), Suite 210, 2991 El Camino Real,
    Redwood City, CA 94061, (US), (Proprietor designated states: all)
INVENTOR:
  CHISHTI, Muhammad, 350 Sharon Park Drive, No. E24, Menlo Park, CA 94025,
    (US)
  LERIOS, Apostolos, Quillen 10C Escondido Village, Stanford, CA 94305,
    (US)
  FREYBURGER, Brian, 1065 Middlefield Road, Palo Alto, CA 94301, (US)
  WIRTH, Kelsey, 350 Sharon Park Drive, No. E24, Menlo Park, CA 94025, (US)
  RIDGLEY, Richard, 1230 Gromwall Court, Los Altos, CA 94024, (US)
LEGAL REPRESENTATIVE:
  Kazi, Ilya et al (86111), Mathys & Squire, 100 Gray's Inn Road, London
    WC1X 8AL, (GB)
PATENT (CC, No, Kind, Date): EP 989828 A1 000405 (Basic)
                              EP 989828 B1 030910
                              WO 98058596 981230
APPLICATION (CC, No, Date):   EP 98931428 980619; WO 98US12861 980619
PRIORITY (CC, No, Date): US 50342 P 970620; US 947080 971008
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE
RELATED DIVISIONAL NUMBER(S) — PN (AN):
     (EP 2003012114)
INTERNATIONAL PATENT CLASS (V7): A61C-007/00

NOTE:
  No A-document published by EPO
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS B (English) 200337   893
      CLAIMS B (German)   200337   933
      CLAIMS B (French)   200337   1039
      SPEC B   (English) 200337   11803
Total word count - document A   0
Total word count - document B   14668
Total word count - documents A + B   14668

...SPECIFICATION herein incorporated by reference.
   The algorithm is centered around a recursive subdivision of the space
occupied by an object, which is organized in a binary-tree like
fashion. Triangles are used to represent the teeth in the DDS. Each
node of the tree is referred to as an oriented bounding box
(OBB) and contains a subset of triangles appearing in the node's
parent. The children of a parent node contain between them all of
the triangle data stored in the parent node.
   The bounding box of a node is oriented so it tightly fits around
all of the triangles in that node. Leaf nodes in the
tree ideally contain a single triangle, but can possibly contain
more than one triangle. Detecting collisions between two objects involves
determining if the OBB trees of the objects intersect. Fig. 9A sets forth
a flow chart depicting a simplified version of a recursive collision test
to check if a node "N1" from a first object intersects with
node "N2" of a second object. If the OBBs of, the root nodes
of the trees overlap, the root's children are checked for overlap. The
algorithm proceeds in a recursive fashion until the leaf nodes are
reached. At this point, a robust triangle intersection
routine is used to determine if the triangles at the leaves are involved
in a collision.
   The present invention provides several enhancements to the collision...

...This approach stems from the observation that there are parts of the
model which will never be involved in a collision, and consequently the
OBB tree for such parts of the model need not be computed. The OBB
trees are expanded by splitting the internal nodes of the
tree as necessary during the recursive collision determination
algorithm, as depicted in Fig. 9B.
   In another embodiment of the present invention, the triangles in the
model which are not required for collision data may also be
specifically excluded from consideration when building an OBB tree.
As depicted in Fig. 9C, additional information is provided to the
collision algorithm to specify objects in motion. Motion may be viewed at
two levels. Objects may be conceptualized as "moving" in a global sense,
or they may be conceptualized as "moving" relative to other objects. The
additional information improves the time taken for the collision
detection by avoiding recomputation of collision information
between objects which are at rest relative to each other since the state
of the collision between such objects ...use a "movie" feature to
automatically animate the movement from initial to target states. This is
helpful for visualizing overall component movement throughout the
treatment process.

Above it was described that the preferred user interface for component
identification is a three dimensional interactive GUI. A
three-dimensional GUI is also preferred...
...impacting of teeth below the gumline is a concern. These template models
could, for example, comprise a digitized representation of the patient's
teeth x-rays.
   The software also allows for adding annotations to the datasets which
can comprise text and/or the sequence number of the apparatus. The
annotation is...

 15/3,K/8   (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

00884189
Document analysis systems and processes
System und Verfahren fur Dokumentenanalyse
Systeme et procede pour l'analyse de documents
PATENT ASSIGNEE:
  NCR International, Inc., (1449484), 1700 South Patterson Boulevard,
    Dayton, Ohio 45479, (US), (Applicant designated States: all)
INVENTOR:
  Crabtree, Ralph Newton, 2090 Black Fox Drive, Atlanta, Georgia 30345,
    (US)
  Peng, Antai, 1782 Walker Avenue, Apt. No. D, Irvington, New Jersey 07111,
    (US)
LEGAL REPRESENTATIVE:
  Williamson, Brian (84715), Internatinal IP Department, NCR Limited, 206
    Marylebone Road, London NW1 6LY, (GB)
PATENT (CC, No, Kind, Date): EP 809219 A2 971126 (Basic)
                              EP 809219 A3 000223
APPLICATION (CC, No, Date):   EP 97303116 970506;
PRIORITY (CC, No, Date): US 652283 960522
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS (V7): G07D-007/00; G06K-009/20
ABSTRACT WORD COUNT: 130
NOTE:
  Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A   (English) 9711W3   462
      SPEC A   (English) 9711W3   10532
Total word count - document A   10994
Total word count - document B   0
Total word count - documents A + B   10994

...SPECIFICATION represent relationships between tokens or objects and
  other complex objects. As shown in Fig. 3, complex objects are
  represented as a directed graph, where each node defines a
  relationship that exists between other objects in the graph. In many
  instances, each node is a new object. As an example, Fig. 3 shows
  the data structure to represent a machine print object that is
  contained within a box. A machine print object 320 is represented as

machine print 321 and a box 322. The box 322 is represented by its
components, vertical lines 323 and 324 and horizontal lines 325 and 326.
The data contained within each node, or object, consists of
an object identifier, a confidence level, reference to the constituent
objects or tokens that compose the new object, and information
describing the size and location of the object.

The information contained within the knowledge database 210 is
partitioned into a hierarchy of knowledge. Complex objects are
structured from more primitive objects. Information can be
therefore partitioned as shown in Fig. 4. Tokens 430 are at the bottom of
the hierarchy. The next level up, 429, are objects formed by the
spatial relationships between tokens. For example two horizontal lines
.05 inches apart. The next level in the hierarchy 428 includes more
objects formed by geometric relationships between objects or tokens. For
example line intersections forming boxes. The highest level may be
spatial relationships between tokens and objects 427 as described for
Fig. 5.

The following information describing spatial relationships
between tokens may be represented in the system.
* groups of tokens based on horizontal location
* groups of tokens based on vertical location...can include line
intersections, simple and complex boxes.

Line intersections are self explanatory. Simple boxes are boxes that
are created by examining the endpoints of line segments.
Complex boxes are boxes that are created by including line intersections,
rather than only analyzing line endpoints for boxes. In general, simple
boxes form the...

15/3,K/9   (Item 9 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00333245
HIGH PERFORMANCE GRAPHICS WORKSTATION AND METHOD OF OPERATING THEREFOR
HOCHLEISTUNGSFAHIGES GRAPHISCHES ENDGERAT SOWIE BETRIEBSVERFAHREN DAFUR
POSTE DE TRAVAIL GRAPHIQUE A HAUTE PERFORMANCE ET METHODE D'EXPLOITATION
    POUR CELA
PATENT ASSIGNEE:
  DIGITAL EQUIPMENT CORPORATION, (313081), 111 Powdermill Road, Maynard
    Massachusetts 01754-1418, (US), (applicant designated states:
    DE;FR;GB;IT;NL)
INVENTOR:
  DOYLE, Peter, Lawrence, 279 Davis Street, Northboro, MA 01532, (US)
  ELLENBERGER, John, Philipp, 296 Nashua Road, Groton, MA 01450, (US)
  JONES, Ellis, Olivier, 124 Rattlesnake Hill Road, Andover, MA 01810, (US)
  CARVER, David, C., 6 Independence Avenue, Lexington, MA 02173, (US)
  DIPIRRO, Steven, D., 270 High Street, Holliston, MA 01746, (US)
  GEROVAC, Branko, J., 116 Boston Post Road, Marlboro, MA 01752, (US)
  ARMSTRONG, William, Paul, 7080 South 2870 East, Salt Lake City, UT 84121,
    (US)
  GIBSON, Ellen, Sarah, 839 East South Temple, Salt Lake City, UT 84102,
    (US)
  SHAPIRO, Raymond, Elliott, 29 Hunter Avenue, Marlboro, MA 01752, (US)
  RUSHFORTH, Kevin, C., 450 N Mathilda Ave S207, Sunnyvale, CA 94086, (US)
  ROACH, William, C., 580 Arapeen Drive, Salt Lake City, UT 84108, (US)

...SPECIFICATION required to represent the display device and the
  processing capability of the graphics system required to process the
  output data for display on a cathode ray tube. For instance, with
  respect to color alone, eight bits of information per pixel may be
  required to store information on the red, green and...

...are stored in a structure memory component in the graphics subsystem.
  The three-dimensional graphics data structures are each implemented as a
  hierarchical graphics data node structure in the structure memory.
  For a thorough discussion of the principal concepts of interactive
  computer graphics as generally employed by the system of the invention,
  reference should be made to Fundamentals of Interactive Computer Graphics
  by J. D. Foley and A. Van Dam (Addison-Wesley 1982).
    Each node is defined as a fundamental memory unit to contain
  graphics data or commands relating to the primitives,
  transformations, attributes and so on of the graphics structure being
  built pursuant to a specific application program residing in...

...asynchronously operational structure walker in the graphics subsystem
  traverses a special control structure stored in the structure memory on a
  continuing basis to read and process requests for traversal of the
  nodes of the graphics structures and to send the data and
  command information contained in the nodes down a graphics
  pipeline for processing, manipulation and display by the graphics
  processing components of the graphics subsystem.
    Pursuant to an important feature of the partitioned among the host and
  graphics subsystem components to accept requests for graphics structures
  traversals made by competing application programs, and to subsequently
  schedule and perform such traversals in a manner such that each of

the competing graphics applications views the graphics processing subsystem as its own and is able to be executed with a most efficient utilization of the system components. The hierarchical node memory structure, asynchronous memory traversal and supervising traversal control functions together facilitate a high performance three-dimensional display capability within the system by providing an efficient allocation of system resources to store complex graphics data structures and to process the graphics data structures in an ordered and coordinated fashion. The system of the invention effectively utilizes efficient coordination and control of ongoing, data driven, asynchronous operation of the graphics subsystem components to place all of the system resources equally at the disposal of a multiple of application programs...

...from the world coordinate system of the user to appropriate geometric coordinates suitable for the physical display device of the workstation, i.e. the cathode ray tube. A window is a rectangular array of pixels which may be partially or wholly visible on the display device depending upon the size of the window relative to the physical dimensions of the display screen. Windows are also in a hierarchy with a "parent" window and sub-windows or "children". Windows may be resized and sub-windows used for clipping when the parent when a sub...

...the X Window System developed under the auspices of the Massachusetts Institute of Technology as a royalty free industry standard. Pursuant to the invention, the data generated by the windowing system to create and define the window coordinates and attributes is uniquely identified by the traversal control system for correlation to the hierarchical graphics data node structure of the object to be displayed within the rectangular array of the window.

Accordingly, the asynchronous traversal by the structure walker is able to provide correlated graphics structure data and commands and window data to the graphics processing components. The window data-graphics structure correlation function of the traversal control further facilitates high performance three-dimensional graphics display by permitting the utilization of a highly effective window system such as the X Window System which was developed primarily for use in two dimensional, bit mapped graphics systems. The window identification data for correlation to the three-dimensional node memory structures systematically merges a three-dimensional functionality into the advantageous X Window System.

Pursuant to another significant feature of the invention, a separate two dimensional, bitmap graphics system is provided in parallel to the three dimensional components to process two dimension application programs. The bit map graphics system has resources suitable for two dimensional graphics including a bitmap memory and a rendering processor to traverse bitmap data commands in structure memory. Moreover, the structure memory is shared by the parallel three dimensional and two dimensional graphics systems to serve both as the three dimensional graphics structure memory and the two dimensional bit map memory. The rendering processor is also shared by the parallel graphics systems to process both bit map graphics and polygon rendering for three dimensional objects. In this manner, the system resources having three dimensional capabilities are not overburdened with...

...SPECIFICATION are stored in a structure memory component in the

graphics subsystem. The three-dimensional graphics data structures are
each implemented as a hierarchical graphics data node structure
in the structure memory. For a thorough discussion of the principal
concepts of interactive computer graphics as generally employed by the
system of the invention, reference should be made to Fundamentals of
Interactive Computer Graphics by J.D. Foley and A. Van Dam
(Addison-Wesley 1982).
    Each node is defined as a fundamental memory unit to contain
graphics data or commands relating to the primitives, transformations,
attributes and so on of the graphics and process requests for traversal
of the nodes of the graphics structures and to send the data and
command information contained in the nodes down a graphics
pipeline for processing, manipulation and display by the graphics
processing components of the graphics subsystem.
    The invention is defined in claims 1...

...function is partitioned among the host and graphics subsystem
components to accept requests for graphics structure traversals made by
competing application programs, and to subsequently schedule and
perform such traversals in a manner such that each of the competing
graphics applications views the graphics processing subsystem as its own
and is able to be executed with a most efficient utilization of the
system components. The hierarchical node memory structure,
asynchronous or independent (in the following we use "asynchronous" only)
memory traversal and supervising traversal control functions together
facilitate a high performance three-dimensional display capability
within the system by providing an efficient allocation of system
resources to store complex graphics data structures and to
process the graphics data structures in an ordered and
coordinated fashion. The system of the invention effectively utilizes
efficient coordination and control of ongoing, data driven,
asynchronous operation of the graphics subsystem components to place all
of the system resources equally at the disposal of a multiple of
application programs...

...from the world coordinate system of the user to appropriate geometric
coordinates suitable for the physical display device of the workstation,
i.e. the cathode ray tube. A window is a rectangular array of
pixels which may be partially or wholly visible on the display device
depending upon the size of the window relative to the physical
dimensions of the display screen. Windows are also in a hierarchy
with a "parent" window and sub-windows or "children". Windows may be
resized and sub-windows used for clipping by the parent when a sub...

...the X Window System developed under the auspices of the Massachusetts
Institute of Technology as a royalty free industry standard. Pursuant
to the invention, the data generated by the windowing system to
create and define the window coordinates and attributes is uniquely
identified by the traversal control system for correlation to the
hierarchical graphics data node structure of the object to
be displayed within the rectangular array of the window.
    Accordingly, the asynchronous traversal by the structure walker is
able to provide correlated graphics structure data and commands
and window data to the graphics processing components. The window
data-graphics structure correlation function of the traversal
control further facilitates high performance three-dimensional graphics

display by permitting the utilization of a highly effective window
system such as the X Window System which was developed primarily for use
in two dimensional, bit mapped graphics systems. The window
identification data for correlation to the three-dimensional
node memory structures systematically merges a three-dimensional
functionality into the advantageous X Window System.
   Pursuant to another significant feature of the invention, a separate
two dimensional, bitmap graphics system is provided in parallel to the
three dimensional components to process two dimension application
programs. The bit map graphics system has resources suitable for two
dimensional graphics including a bitmap memory and a rendering processor
to traverse bitmap data commands in structure memory. Moreover,
the structure memory is shared by the parallel three dimensional and
two dimensional graphics systems to serve both as the three
dimensional graphics structure memory and the two dimensional bit map
memory. The rendering processor is also shared by the parallel graphics
systems to process both bit map graphics and polygon rendering for
three dimensional objects. In this manner, the system resources having
three dimensional capabilities are not overburdened with...

 15/3,K/10   (Item 1 from file: 349)
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00984066   **Image available**
A PRINTING CARTRIDGE WITH CAPACITIVE SENSOR IDENTIFICATION
CARTOUCHE   D'IMPRESSION   COMPORTANT UNE FONCTION D'IDENTIFICATION DES
   CAPTEURS CAPACITIFS
Patent Applicant/Assignee:
  SILVERBROOK RESEARCH PTY LTD, 393 Darling Street, Balmain, New South
    Wales 2041, AU, AU (Residence), AU (Nationality), (For all designated
    states except: US)
Patent Applicant/Inventor:
  SILVERBROOK Kia, Silverbrook Research Pty Ltd, 393 Darling Street,
    Balmain, New South Wales 2041, AU, AU (Residence), AU (Nationality),
    (Designated only for: US)
Legal Representative:
  SILVERBROOK Kia (agent), Silverbrook Research Pty Ltd, 393 Darling
    Street, Balmain, New South Wales 2041, AU,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200313862 A1 20030220 (WO 0313862)
  Application: WO 2002AU1055 20020806 (PCT/WO AU0201055)
  Priority Application: US 2001922112 20010806
Designated States:
(Protection type is "patent" unless otherwise stated – for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
  SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English

Filing Language: English
Fulltext Word Count: 143013

Fulltext Availability:
  Detailed Description

Detailed Description
... by truncation, and this value used as a lookup for the cubic
  approximation of fp.

  The calculation of fa, can therefore be represented as a process
  with the inputs and outputs as illustrated in Fig. 135 with an actual
  process for calculating fp is as shown in Fig. 136 where the
  following constants are set by software.

  Constant Value
  K, XLT
  K2 YLT
  K3 ZLT...applied to an image, the ambient light contribution is performed
  once for each pixel, and does not depend on the bump-map.

  The ambient calculation process can be represented as a
  process with the inputs and outputs as illustrated in Fig. 13 1.
  The implementation of the process requires multiplying each pixel
  from the input image (0d) by a constant value (I0,ka), as shown in Fig.
  138 where the following constant is...

 15/3,K/11   (Item 2 from file: 349)

00982500   **Image available**
METHOD AND SYSTEM FOR VALUING INTELLECTUAL PROPERTY
PROCEDE ET SYSTEME D'EVALUATION DE PROPRIETE INTELLECTUELLE
Patent Applicant/Inventor:
  LEIBOWITZ Mark Harold, 37 Parel Valley Road, 7130 SOMERSET WEST, ZA, ZA
    (Residence), ZA (Nationality)
  SEEBREGTS Christopher John, 13 Raapskrall Court, 7945 KIRSTENHOF, ZA, ZA
    (Residence), ZA (Nationality), (Designated only for: US)
Legal Representative:
  FIANDEIRO Joao Achada (et al) (agent), PO Box 41312, 2024 CRAIGHALL, ZA,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200312573 A2-A3 20030213 (WO 0312573)
  Application: WO 2002IB2958 20020731 (PCT/WO IB0202958)
  Priority Application: ZA 20016302 20010731
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
  SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

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  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 11315
```

Fulltext Availability:
  Detailed Description

Detailed Description
... the general valuation process
  carried out by the system;
  Figure 4 is a structural diagram of a general artificial neural network
  (ANN) with four input nodes, four hidden nodes and four
  output nodes and weighted interconnections between nodes;
  Figure,5 is a flow diagram depicting the mechanism by which the
  artificial neural network is trained to predict values according
  to the method of...the licensor and the country of the licensee?
    How are the royalty rates paid under the license (timing of)? Are
  there any upfront payments or milestone payments?
    What is the remaining life of the IP?
    Is there ongoing support from the licensor?
    Are there any regulatory issues?
  I
  The above information...The above lists are not exhaustive and it is
  likely that other parameters will be important in specific industries or
  will become evident in time.

  Information Loading
  Figure details the overall process by which information is
  introduced into
  1@ I
  the system and the various databases comprising the information
  stores
  I! I
  are loaded with data.

  Licensing and sale transactions are analyzed in order to dissect the
  information in the Transaction Database 1 0 and extract relevant
  information
  into separate data...

 15/3,K/12   (Item 3 from file: 349)
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00979605   **Image available**
SYSTEM FOR PROVIDING ALERT-BASED SERVICES TO MOBILE STATIONS IN A WIRELESS
    COMMUNICATIONS NETWORK
SYSTEME DE DISTRIBUTION DE SERVICES D'AVERTISSEMENT A DES STATIONS MOBILES
    DANS UN RESEAU DE COMMUNICATION SANS FIL
Patent Applicant/Assignee:
  WAVEMARKET INC, 5858 Horton, Suite 250, Emeryville, CA 94608, US, US
    (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
  IOPP IGOR V, 47 Fort Mason, San Francisco, CA 94123, US, US (Residence),

CA (Nationality), (Designated only for: US)
  ROUMELIOTIS Tasso, 1433 Spruce Street, Unit B, Unit B, Berkeley, CA 94709
    , US, US (Residence), CA (Nationality), (Designated only for: US)
  HOTES Scott Allen, 1332 B. Navellier St., El Cerrito, CA 94530, US, US
    (Residence), US (Nationality), (Designated only for: US)
  KLEIN Philip Nathan, 532 Elmgrove Ave., Providence, RI 02906, US, US
    (Residence), US (Nationality), (Designated only for: US)
  SUSAL Joel A, 2370 Greer Road, Palo Alto, CA 94303, US, US (Residence),
    US (Nationality), (Designated only for: US)
Legal Representative:
  GEORGIEV Stephan P (et al) (agent), Smart & Biggar, 1000 de la
    Gauchetiere Street West, Suite 3400, Montreal, Quebec H3B 4W5, CA,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200309605 A2-A3 20030130 (WO 0309605)
  Application: WO 2002CA1080 20020716 (PCT/WO CA0201080)
  Priority Application: US 2001305580 20010716; US 2002359793 20020226; US
    2002359792 20020226; US 2002360527 20020228
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
  SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 18672

Fulltext Availability:
  Detailed Description

Detailed Description
... conditions, which are described further on in-this specification.

  D
  (3) Data structure Sj is initially created in the following manner.

  (i) compute for each node the nearest alert region applicable to
  users in category j.

  SUBSTITUTE SHEET (RULE 26)
  (ii) find a planar subdivision in which each cell contains exactly one
  node (see Fig.

  7A). One such planar subdivision is the Voronoi diagram 720 of the
  nodes
  71 0. Algorithms for computing the Voronoi diagram of a set of points
  will be known to those of ordinary skill in the art. Note...computed once
  and stored until all categories have been processed. The result is the
  creation of
  L 0 multiple cells 73 0, one surrounding each node 71 0;
  (iii) merge together cells of the subdivision having the same nearest

alert region (see Fig. 7B). One method for doing this is by...

...following merge step. If there are two adjacent cells (e.g., 730A, 73013) in the .5 subdivision such that the alert region nearest to the nodes in one cell equals the alert region nearest to nodes in the other cell, remove from the subdivision those segments that lie on the boundaries of both cells. Repeat this step until no such adjacent...

...table in step (1)(iii) using the cells 740; and
(v) the subdivision found in step (3)(iii) defines a partition of the set of nodes, where two nodes belong to the same block of the partition if they lie in the same cell of the subdivision. Apply heuristics to reduce the number of line segments defining the planar subdivision found in step (3)(iii) without changing the partition of nodes. For example, the cells 740 from Fig. 713 will become the cells 740' in Fig. 7C.

One heuristic that is suitable for use with step (3)(v) uses the following improvements.

With reference to Fig. 8A, for example, consider a pair of line segments LI and L2 sharing an endpoint P such that no other line segment in the planar subdivision is incident to P. With reference to Fig. 813, let L denote the line segment connecting the endpoint of LI that is not P to the endpoint of L2 that is not P. Check whether the triangle formed by L, LI and L2 contains any nodes. If not (which is the case in Fig.

SUBSTITUTE SHEET (RULE 26)
Other heuristics that are suitable for use with (3)(v) can be derived to the subdivision found in step (3)(iii) to reduce the number of line segments. Specifically, allow a node V to more to a different cell C if the travel time from the node V to the alert region associated with cell C – from the table in step (1)(iii)– approximates (to within a prescribed or absolute error) the travel tine from node V to the nearest alert region. For example, modifying the heuristic L 5 described in step (3)(v), if the triangle formed by L, LI and L2 contains nodes, then replacing LI and L2 by L would change which cell contains those nodes; still, perform the replacement if for each of those nodes the travel time to the alert region associated with the new cell is not significantly greater (e.g., by 10%) that the travel time to the actual nearest alert region.
2 0
(4) Data structure Sj is updated in the following manner.

(i) find the set of nodes whose travel time to the new alert region is less than the travel time to the previously chosen alert. This step can be done quickly by 2 5 using a traditional shortest-path search rooted at the new alert region, modified not to explore the neighbours of any node V whose travel time to the new alert region is greater than the travel time to the alert region associated with the cell containing node V; and
3 0 (ii) create a polygon (or set of polygons) enclosing the set of nodes found in step (4)(i), and excluding other nodes. This can be done in several ways. One way is to find the convex hull of the' set of nodes found, and then perturb the boundary of the convex

hull to exclude other nodes. Another way

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00962256
ANTIBODIES SPECIFIC FOR CD44V6
ANTICORPS SPECIFIQUES CONTRE CD44V6
Patent Applicant/Assignee:
  BOEHRINGER INGELHEIM INTERNATIONAL GMBH, 55216 Ingelheim am Rhein, DE, DE
    (Residence), DE (Nationality), (For all designated states except: US)
  BOEHRINGER INGELHEIM PHARMACEUTICALS INC, 900 Ridgebury Road, Ridgefield,
    CT 06877, US, US (Residence), US (Nationality), (For all designated
    states except: US)
Patent Applicant/Inventor:
  ADOLF Gunther, Stiftgasse 15-17/10, A-1070 Wien, AT, AT (Residence), AT
    (Nationality), (Designated only for: US)
  OSTERMANN Elinborg, Mauerbachstrasse 56/6, A-1140 Wien, AT, AT
    (Residence), AT (Nationality), (Designated only for: US)
  PATZELT Erik, Hans Buchmueller-Gasse 8, A-3002 Purkersdorf, AT, AT
    (Residence), AT (Nationality), (Designated only for: US)
  SPROLL Marlies, Munchenerstrasse 32a, 82131 Gauting, DE, DE (Residence),
    DE (Nationality), (Designated only for: US)
  HEIDER Karl-Heinz, Johann-Strauss-Promenade 4/11, A-2000 Stockerau, AT,
    AT (Residence), DE (Nationality), (Designated only for: US)
  MIGLIETTA John J, 34 Country Way, Bethel, CT 06801-2936, US, US
    (Residence), US (Nationality), (Designated only for: US)
  VAN DONGEN Augustinus Antonius Maria Silvester, Poortstraat 52, NL-3572
    HL Utrecht, NL, NL (Residence), NL (Nationality), (Designated only for:
    US)
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200294879 A1 20021128 (WO 0294879)
  Application: WO 2002EP5467 20020517 (PCT/WO EP0205467)
  Priority Application: EP 2001112237 20010518; US 2001325147 20010926
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI
  SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 41597
Fulltext Availability:
  Detailed Description
  Claims

Claim

... 99'nTc Technetium 99m (half-life 6 hours)
TLC Thin Layer Chromatography
Tmax Time point at which the maximum drug concentration is observed
TNM Tumour Node Metastasis ...propose a safe dose for first and
consecutive infusions with "6Re-labelled hMAb BIWA 4 for further studies.
  To obtain initial results on a dose schedule for repeated dosing.
2.2 PRFqARY VARIABLES
  Safety: clinical laboratory tests, human-anti-human-antibody (HAHA)
assessments, vital signs measurements and adverse events. Efficacy:
biopsy biodistribution data (Part A only) and
radioimmunoscintigraphic images (Part A and B including dosimetry for
Part B'of the trial). * Pharmacokinetic results.
SECONDARY VARIABLES
A secondary variable...4.
3 1 Part A:
This part of the clinical trial was an uncontrolled, rising dose
sequential group study. It was designed to provide initial data on
the safety and tolerability of a single infusion of 99'Tclabelled hMAb
BIWA 4, to investigate the pattern and level of biodistribution and to...
Moreover, the amount of 99Tc in biopsies from tumour site(s) and normal
tissues in the surgical specimen was measured. Tumour sites and turnour
infiltrated nodes were examined for the presence of CD44v6 antigen
by immunohistochemical techniques. The first three patients were
administered ...was reached. Patients were observed for occurrence of
adverse events. Radioimmunoscintigraphic scans were performed.
3,13 STUDY PROCEDURES AT EACH VISIT
3 3.1 Visit Schedule
a) Screening visit
Before entry into the study each patient was screened for eligibility.
Demographics and medically relevant history were recorded, concomitant
therapy was recorded...was made and blood as well as urine safety
laboratory assessments were done. A blood sample for HAHA-testing was
also taken. A Chest X-ray was made and a full disease assessment
(CTAM, ear-nose-throat [ENT] examination) was performed. At the end'of
this visit the results of the...linker change. Instead patients who
responded to the first dose of "'Re-BIWA 4 were eligible for a second
administration. They underwent the same visit schedule as for the
first administration.
3.2 DISCUSSION OF STUDY DESIGN9 INCLUDING THE
CHOICE OF CONTROL GROUPS
The aim of the present study was to...drug-related Common Toxicity
Criteria (CTC) grade 4 haematology and grade 3 non-haematology toxicity a
further three patients were treated with the respective dose tier
(for further dosing details refer to section 3 4. and 3 5). The dose of
BIWA 4 administered was based on previous results with niNIAb...the
results from Part A of the trial (see also section 3 4. 1). The starting
dose level for radioactivity chosen was based on previous data
suggesting that a dose of 20 rnCi/m@ may be a safe dose (see also section
3 4.2). The criteria for efficacy which applied...be. feasible if the
patient was prematurely removed from the study because of voluntary
withdrawal. A case was considered not evaluable if adequate follow-up
information was not available. Any unevaluable patients were
planned to be replaced. If the patient discontinued early from the study,
the reason had to be documented...post-infusion blood samples for HARA
determination or pharmacokineties, the reason had to be documented. If a
patient developed a serious adverse event the study schedule had to

be followed as closely as possible depending on the serious adverse events (SAE).

1.5 3A TREATMENTS

3 1 Treatments administered

Patients in...and neck tumours (n--54) and by the majority of cells within these tumours. A comparable expression was observed for sixty-eight tumour infiltrated lymph nodes from neck dissection specimens (R97-2054). The reactivity pattern. of hMAb BIWA 4 in human normal tissues is provided in Appendix HI of the protocol...and the radioactivity in pellet and supernatant were determined in a gamma counter and the percentage bound and free radiolabelled AIM calculated (LKBWallac 1218 CompuGamma). Data were graphically analysed in a modified Lineweaver Burk plot and the immunoreactive fraction was determined by linear extrapolation to conditions representing infinite antigen excess. In...Food and Drug Administration (FDA) 1994 "Points to consider" document on MAbs used in clinical phase I studies in cancer patients, a standardised downstream purification process, which has been validated for efficient virus removal, was applied to the purification of BIWA 4 material. Four model viruses were included in ... the validation QvIuLV, PsRV, REO-3, SV 40). The concentrated bulk harvest was examined for the retrovirus titer to ensure that the subsequent downstream purification process was capable of adequately removing the retrovirus. Data on removal of endotoxins were within the acceptance limits (< 0. 0 1 EU/mg) and were available for the bulk product. Furthermore pyrogenicity testing according...Labelling and Supply

BIWA 4 was supplied by Boehringer Ingelheim. The Netherlands. It was produced by Boehringer Ingelheim, Germany using a GMP manufacturing and purification process and filled in vials as a sterile, non-pyrogenic solution containing 25 mg hMAb BIWA 4 in 5 niL ...being optimal for mMAb U36. To confirm that this dose also was adequate for the intermediate affinity of hMAb BIWA 4 and to obtain initial information on the variability of the tumour uptake the biodistribution was assessed at 25, 50 and 100 mg total hMAb BIWA 4 and three evaluable patients...a dose of 50 mCi/m@ "'Re-BIWA 4.

3 5 Selection and timing of dose for each subject

3 5.1 Dosage and Treatment Schedule

2-5 The investigators were allowed to administer the trial drug at any time. The time elapsed between radiolabelling and administration, however, should not exceed...consent x

Demographics X
Conc. Therapy x X X x x X X X
Medical History X
Physical Examination X x
ECG X
Chest X-ray x
Blood safety analysis x I X x x xi xI
Urine safety analysis x X X
Pregnancy test X X
HAHA assessment x 2...Conc. Therapy x x x X x x x 2@ 31 41 5@ 6
Medical History x
Physical Examination x 6
ECG x
Chest X-ray X
Blood safety analysis xI xI xi x I x 1 2@ 3@ 47 5@ 6
Urine safety analysis x X 6

Pregnancy test x...or loss to follow-up. CT thorax was done at baseline and repeated at follow-up if there were abnormalities.

3 1.1 Radioimmunoseintigraphyanddosimetry

The data obtained from radioimmunoscintigraphy (RIS) were presented qualitatively for both Part A and B (i.e. uptake in tumour, bone marrow, liver, lung, intestine, kidney and...hrs after infusion. At 21 hrs p.i. planar and SPECT images of the head and neck were acquired. A calibration source also was acquired. Data was stored to enable quantitative analysis.

.5 Part B

With a large field of view dual headed gamma camera equipped with a low energy collimator...a low energy collimator. Acquisition required at least thirty minutes. Twenty percent symmetric windows were centred at the 137 keV photon peaks.

Planar and SPECT data acquisition parameters

Planar imaging included the following minimal requirements: matrix 128x128 (detail) or 256 x 256 (whole body) and a minimum of 400000 counts with...

...imaging included the following minimal requirements: 64 images, matrix size 64 x 64, 360 degree circular orbit, 60 second acquisitions per angle.

Analysis of the data

At ...system had to include center of rotation determination.

Toniogrgphic processing

A filtered back projection algorithm was used for tomographic image reconstruction using a ramp filter.

Data storag

All planar images and tomographic data had to be stored pennanently on magnetic tape or optical disc. For tomographic studies, original projecting images and reconstructed studies had to be written to...the front and slides from the front and back.

2 The size of the surgical specimen was assessed. 3 . Biopsies of primary tumour, suspect lymph node, and if possible from normal tissues in 1-5 the surgical specimen like nonnal mucosa, normal lymph node, fat and muscle were taken. All biopsies were weighed and the amount of 99'Tc was measured. All data were converted to percentages injected dose ...

...dissecting the stemocleidomastoid muscle (a structure with a high radiodensity), a specimen radiograph was made to show the exact size and location of the lymph nodes involved. This radiograph was made while the specimen was being immersed in ethanol 96%, which has the same X-ray absorption as fat.

6 All the nodes visualised with the X-ray were indicated on the Polaroid and specimen radiograph.

7 All the nodes found by examining the surgical specimen and by X-ray were dissected from the specimen.

8 All macroscopically negative nodes were entirely processed for microscopy and one single section was evaluated. Of all macroscopically positive nodes two or more slices were made. Macroscopical evidence for the presence or absence of tumour necrosis were recorded.

9 Furthermore, the number of nodes enclosed and the number,
localisation and lymph node level (according to the Memorial Sloan
Kettering Cancer Center Classification) of tumour containing nodes
were recorded.
3 1.3 Tuniour Response (Part B)
The efficacy parameter for the radioimmunotherapy treatment was tumour
response. Tumour response was assessed with tumour...were examined at
baseline by an otolaryngologist/head and neck surgeon. This clinical
investigator assessed the number, size, location and mobility of all
palpable lymph nodes in the head and neck area. The character of
the lymph nodes was described as: not suspected, suspected or
turnour infiltrated. The status of the neck lymph nodes was
classified according to the Tumour Node Metastasis system for
staging tumours (TNA4) of the Union Internationale Contre le Cancer
(UICC) at diagnosis.
Radiological examination
Depending on ...the chest muscles. The appropriate images to demonstrate
the neck anatomy and to assess the extent of the primary lesion and the
presence of lymph node spread was obtained. They had to be obtained
from the skull base to the upper mediastinum.
Distant metastases
1.5 For all patients participating in...

 15/3,K/14   (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00933152   **Image available**
EXTENDED WEB ENABLED MULTI-FEATURED BUSINESS TO BUSINESS COMPUTER SYSTEM
    FOR RENTAL VEHICLE SERVICES
SYSTEME INFORMATIQUE ETENDU ENTRE ENTREPRISES, A FONCTIONS MULTIPLES,
    FONCTIONNANT SUR LE WEB, POUR DES SERVICES DE LOCATION DE VEHICULES
Patent Applicant/Assignee:
  THE CRAWFORD GROUP INC, 600 Corporate Park Drive, St. Louis, MO 63105, US
    , US (Residence), US (Nationality), (For all designated states except:
    US)
Patent Applicant/Inventor:
  WEINSTOCK Timothy Robert, 1845 Highcrest Drive, St. Charles, MO 63303, US
    , US (Residence), US (Nationality), (Designated only for: US)
  DE VALLANCE Kimberly Amm, 2037 Silent Spring Drive, Maryland Heights, MO
    63043, US, US (Residence), US (Nationality), (Designated only for: US)
  HASELHORST Randall Allan, 1016 Scenic Oats Court, Imperial, MO 63052, US,
    US (Residence), US (Nationality), (Designated only for: US)
  KENNEDY Craig Stephen, 9129 Meadowglen Lane, St. Louis, MO 63126, US, US
    (Residence), US (Nationality), (Designated only for: US)
  SMITH David Gary, 10 Venice Place Court, Wildwood, MO 63040, US, US
    (Residence), US (Nationality), (Designated only for: US)
  TINGLE William T, 17368 Hilltop Ridge Drive, Eureka, MO 63025, US, US
    (Residence), US (Nationality), (Designated only for: US)
  KLOPFENSTEIN Anita K, 433 Schwarz Road, O'Fallon, IL 62269, US, US
    (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  HAFERKAMP Richard E (et al) (agent), HOWELL & HAFERKAMP, L.C., Suite
    1400, 7733 Forsyth Blvd., St. Louis, MO 63105-1817, US,

Patent and Priority Information (Country, Number, Date):
  Patent: WO 200267175 A2 20020829 (WO 0267175)
  Application: WO 2001US51437 20011019 (PCT/WO US0151437)
  Priority Application: US 2000694050 20001020
Parent Application/Grant:
  Related by Continuation to: US 2000694050 20001020 (CIP)
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ
  EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK
  SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 243912

Fulltext Availability:
  Detailed Description

Detailed Description
... provide a much more robust interaction
  capability through the creation of menu designs that allow for
  access to the most commonly needed features from any point in
  the menu architecture. This is to be contrasted with the
  prior system which consisted of a main frame character based
  interface while the first...the first parent's invention creates almost
  an illusion that the services purchaser, and the great number
  of users at various levels of the multi-tier purchaser users,
  are actually part of the services provider organization in
  that immediate online access is provided to significant data
  which enable the user to...

 15/3,K/15   (Item 6 from file: 349)
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00909145   **Image available**
PLANAR LASER ILLUMINATION AND IMAGING (PLIIM) SYSTEMS WITH INTEGRATED
    DESPECKLING MECHANISMS PROVIDED THEREIN
SYSTEMES PLIIM D'ILLUMINATION ET D'IMAGERIE AU LASER PLANAIRE A MECANISME
    DE DECHATOIEMENT INTEGRE
Patent Applicant/Assignee:
  METROLOGIC INSTRUMENTS INC, 90 Coles Road, Blackwood, NJ 08012, US, US
    (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
  TSIKOS Constantine J, 65 Woodstone Drive, Voorhees, NJ 08043-4749, US, US
    (Residence), US (Nationality), (Designated only for: US)
  KNOWLES Carl Harry, 425 East Linden Street, Morrestown, NJ 08057, US, US
    (Residence), US (Nationality), (Designated only for: US)
  ZHU Xiaoxun, 669 Barton Run Boulevard, Marlton, NJ 08053, US, US

(Residence), CN (Nationality), (Designated only for: US)
  SCHNEE Michael D, 41 Penns Court, Aston, PA 191014, US, US (Residence),
     US (Nationality), (Designated only for: US)
  AU Ka Man, 1224 Devereaux Avenue, Philadelphia, PA 19111, US, US
     (Residence), US (Nationality), (Designated only for: US)
  WIRTH Allan, 358 Concord Road, Bedford, MA 01730, US, US (Residence), US
     (Nationality), (Designated only for: US)
  GOOD Timothy A, 2041 Broad Acres Drive, Clementon, NJ 08021, US, US
     (Residence), US (Nationality), (Designated only for: US)
  JANKEVICS Andrew J, 80R Carlisle Road, Westford, MA 01886, US, US
     (Residence), US (Nationality), (Designated only for: US)
  GHOSH Sankar, Apartment #B27, 100 W. Oadk Lane, Glenolden, PA 19036, US,
     US (Residence), US (Nationality), (Designated only for: US)
  NAYLOR Charles A, 486 Center Street, Sewell, NJ 08080, US, US (Residence)
     , US (Nationality), (Designated only for: US)
  AMUNDSEN Thomas, 620 Glen Court, Turnersville, NJ 08012, US, US
     (Residence), US (Nationality), (Designated only for: US)
  BLAKE Robert, 762 Fairview Avenue, Woodbury Heights, NJ 08097, US, US
     (Residence), US (Nationality), (Designated only for: US)
  SVEDAS William, 515 Longwood Avenue, Deptford, NJ 08096, US, US
     (Residence), US (Nationality), (Designated only for: US)
  DEFONEY Shawn, 331 Fay Ann Court, Runnemede, NJ 08078, US, US (Residence)
     , US (Nationality), (Designated only for: US)
  SKYPALA Edward, 1501 Old Blackhorse Pike, Suite 0-2, Blackwood, NJ 08012,
     US, US (Residence), US (Nationality), (Designated only for: US)
  VATAN Pirooz, 5122 Lexington Ridge Drive, Lexington, MA 02421, US, US
     (Residence), US (Nationality), (Designated only for: US)
  DOBBS Russell Joseph, 4 Grass Road, Cherry Hill, NJ 08034, US, US
     (Residence), US (Nationality), (Designated only for: US)
  KOLIS George, 5037 Jackson Avenue, Pennsauken, NJ 08110, US, US
     (Residence), US (Nationality), (Designated only for: US)
  SCHMIDT Mark C, 1659 Woodland Drive, Williamstown, NJ 08094, US, US
     (Residence), US (Nationality), (Designated only for: US)
  YORSZ Jeffrey, 24 Fells Road, Winchester, MA 01890, US, US (Residence),
     US (Nationality), (Designated only for: US)
  GIORDANO Patrick A, 1501 Little Gloucester Road, Apartment #U-40,
     Blackwood, NJ 08012, US, US (Residence), US (Nationality), (Designated
     only for: US)
  COLAVITO Stephen J, 3520 Edgewater Lane, Brookhaven, PA 19015-2607, US,
     US (Residence), US (Nationality), (Designated only for: US)
  WILZ David W Sr, 10 Orion Way, Sewell, NJ 08080, US, US (Residence), US
     (Nationality), (Designated only for: US)
  SCHWARTZ Barry E, 407 Farwood Road, Haddonfield, NJ 08033, US, US
     (Residence), US (Nationality), (Designated only for: US)
  KIM Steve Y, 129 Franklin Street, #113, Cambridge, MA 02139, US, US
     (Residence), US (Nationality), (Designated only for: US)
  FISCHER Dale, 204 Sunshire Lakes Drive, Voorhees, NJ 08043, US, US
     (Residence), US (Nationality), (Designated only for: US)
  VAN Tassel John E Jr, 8 Arbor Lane, Winchester, MA 01890, US, US
     (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  PERKOWSKI Thomas J (et al) (agent), Thomas J. Perkowski, Esq., P.C.,
     Soundview Plaza, 1266 East Main Street, Stamford, CT 06902, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200243195 A2-A3 20020530 (WO 0243195)
  Application: WO 2001US44011 20011121 (PCT/WO US0144011)

Claim
... the rotating refractive disc sections 371 and its neighboring
  cylindrical lenslet 371 are optically combined by the cylindrical lens
  array and projected onto the same points on the surface of the
  object being illuminated, thereby contributing to the resultant
  time-varying (uncorrelated) electric field intensity produced at each
  detector element in...

 15/3,K/16   (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00835793   **Image available**
SYSTEM AND METHOD FOR AUTOMATING BUSINESS PROCESSES AND PERFORMING DATA
    INTERCHANGE OPERATIONS IN A DISTRIBUTED COMPUTING ENVIRONMENT
SYSTEME ET PROCEDE D'AUTOMATISATION DE PROCESSUS D'ENTREPRISES ET DE
    REALISATION D'OPERATIONS D'ECHANGE DE DONNEES DANS UN ENVIRONNEMENT
    INFORMATIQUE DISTRIBUE
Patent Applicant/Assignee:
  COMMERCEROUTE INC, Suite 325, 6425 Christie Avenue, Emeryville, CA 94608,
    US, US (Residence), US (Nationality)
Inventor(s):
  SEHAYEK Ilan, 2613 Carlmont, Belmont, CA 94002, US,
  MENDEZ Carlos, 2105 - 1st Avenue #403, Seattle, WA 98121, US,
  SHAKKED Orr, 15 Sullivan Drive, Moraga, CA 94556, US,
  ROTEM Doron, 22 Williams Drive, Moraga, CA 94556, US,
  NORDBERG Per Henrik, 1675 Geary Road, Walnut Creek, CA 94596-2519, US,
  CHU Shung-Yang Frank, 301 Rugby Avenue, Kensington, CA 94708, US,
Legal Representative:
  URIBE Mauricio A (agent), Christensen O'Connor Johnson & Kindness PLLC,

Fulltext Availability:
  Detailed Description
  Claims

Claim
... referred to as business workflows or just workflows. In the past,
  before computers were widely interconnected through networks, the
  workflows were performed as a manual process. In this manual
  process, each participant in the workflow reviewed and completed a
  portion of a forin and then manually routed the form to the next
  participant. As one can imagine, this manual process had several
  disadvantages. One disadvantage was the physical delay in
  routing the form. Another disadvantage was the time-consuming method for
  checking the status of...

...growth of networked computers and e-mail, the automation of
  business workflows became more possible. Electronic forms replaced paper
  forms. Databases storing large amounts of information replaced file
  cabinets. E-mail replaced manual routing. However, the first attempts at
  providing an automated WO 01/69431 PCT/US01/08611 optical drives.
  Therefore...

...create a target object, and saving the target object at a target object
  location. The present invention farther provides a graphical system for
  creating, editing, scheduling, and executing such data
  interchange operations in a distributed computing environment.
  Brief DescLiption of the Drawings
  The foregoing aspects and many of the attendant advantages of this
  invention will...

...operation of the present invention;
  FIGURE 2 is a block diagram illustrating the interaction of tasks in an
  illustrative requisition workflow;
  FIGURE 3 is a process flow diagram illustrating the interaction of
  the various
  components of the present invention;

FIGURE 4 is an illustrative screen display of one embodiment of the...

...list window illustrating the creation of an action list for the manager escalation task;
FIGURE IO is a flow diagram illustrating an overview of the process performed by the workflow engine for processing incoming messages;
FIGURE 1 1 is a flow diagram illustrating a process of executing a task
suitable for use in the process shown in FIGURE 1 0;
FIGURE 12 is a flow diagram illustrating a process of executing a route
suitable for use in the process shown in FIGURE 1 1;
FIGURE 13 is a flow diagram illustrating a process of executing an object
suitable for use in the process shown in FIGURE 1 1;
FIGURE 14 is a flow diagram illustrating a process of executing database
calls suitable for use in the process shown in FIGURE I 1;
FIGURE 15 is a flow diagram illustrating a process of executing expressions
suitable for use in the process shown in FIGURE 1 1;
FIGURE 16 is a flow diagram illustrating a process of executing external
logic suitable for use in the process shown in FIGURE 1 1;
FIGURE 17 is a flow diagram illustrating a process of executing internal
drivers suitable for use in the process shown in FIGURE I 1;
FIGURE 18 is a flow diagram illustrating a process performed by the
WO 01/69431 PCT/USOI/08611
FIGURE 27 is a block diagram of an illustrative network infrastructure providing a suitable environment for...

...diagram illustrating a hardware architecture for a client computer utilized in an embodiment of the present invention;
FIGURE 30 is a flow diagram illustrating a process for defining a data
interchange operation;
FIGURE 31 is a flow diagram illustrating a process for defining and editing
accounts in an automated business processes service; '
FIGURE 32 is an illustrative screen display showing a window for defining accounts in an automated business process service;
FIGURE 33 is a flow diagram illustrating a process for defining and editing
projects in an automated business processes service;
FIGURE 34 is a is a flow diagram illustrating a process for defining and
editing data interchange operations in an automated business
processes service; FIGURE 35 is an illustrative screen display showing a window for defining
and editing projects;
FIGURE 36 is an illustrative screen display showing a window for defining
and editing a data interchange operation;
FIGURE 37 is a flow diagram illustrating a process for defining and editing
source objects;

FIGURE 38 is a flow diagram illustrating a process for defining and editing
target objects;
FIGURE 39 is an illustrative screen display showing a window for defining
and editing source objects;
FIGURE 40 is an illustrative screen display showing a window for defining
and editing target objects;
FIGURE 41 is a flow diagram illustrating a process for defining and editing
schedules for performing data interchange operations;
FIGURE 42 is an illustrative screen display showing a window for defining
and editing schedules for performing data interchange
operations;
FIGURE 43 is a flow diagram illustrating a process for defining
aspects of a
data interchange operation;
FIGURE 44 is a flow diagram illustrating a process for defining and
editing
documents utilized by a data interchange operation;
FIGURE 45 is an illustrative screen display showing a window for defining
and editing documents utilized by a data interchange operation;
FIGURE 46 is a flow diagram illustrating a process for defining and
editing
transformations utilized by a data interchange operation;
FIGURE 47 is a flow diagram illustrating a process for defining and
editing
target messages utilized by a data interchange operation;
FIGURES 48A-48E and 49 are illustrative screen displays showing windows
for defining and editing transfort-nations utilized by a data
interchange operation; FIGURE 50 is an illustrative screen display
showing a window for defining
and editing target messages utilized by a data interchange
operation;
FIGURE 51 is a flow diagram illustrating a process for defining and
editing
process messages utilized by a data interchange operation;
FIGURE 52 is a flow diagain illustrating a process for defining
administrative functions in an automated business processes service
system; FIGURE 53 is an illustrative screen display showing a window for
defining
and editing process messages utilized by a data interchange
operation;
FIGURE 54 is an illustrative screen display showing a window for viewing
a
system log in an automated business processes service system;
FIGURE 55 is an illustrative screen display showing a window for viewing
a queue of current data interchange operations in an automated
business processes
service system;
FIGURE 56 is an illustrative screen display showing a window for viewing
a history of file transfers performed by data interchange
operations in an automated
business processes service system;
FIGURE 57 is a flow diagram illustrating a process utilized by an
operation
resolver for executing data interchange operations;

FIGURE 57A is a flow diagram illustrating a routine for performing a transformation/mapping operation.

FIGURE 58 is a flow diagram illustrating a process for scheduling the execution of data interchange operations;

FIGURE 59 is a flow diagram illustrating a process for administrating the operation of a workflow engine in an automated business processes service system; FIGURE 60 is an illustrative screen display showing a window...

...a window for modifying permissions of users and groups in an automated business processes service system; FIGURE 66 is a flow diagram illustrating an illustrative process for executing a data interchange operation on a workflow engine;

FIGURE 67 is an illustrative screen display showing a window for adding a data interchange operation to a workflow process;

FIGURE 68 is an illustrative screen display showing a window for selecting process versioning options; and

FIGURE 69 is an illustrative screen display showing a window for assigning WO 01/69431 PCT/USOI/08611 coupled to an organization...

...computer of the type that includes an amount of volatile memory, and non-volatile memory. The non-volatile memory includes a hard disk or other data storage device. Computer-readable medium residing in the non-volatile memory is accessible by the computer. The computer-readable medium includes computer-executable components. In...

...20 and server computer 22 includes a processor, a keyboard, a directional input device such as a mouse, and a monitor, such as a cathode ray tube (CRT) or a liquid crystal display (LCD). Programs executed by the client computer 20 and server computer 22 preferably use a graphical user interface...

...various organizations 12 is the Internet. The Internet is a commonly used wide area network that comprises many networks linked together to form a global data link. The Internet, wide and local area networks, and TCP/IP communication mediums are well understood by those of ordinary skill in the art and...more WO 01/69431 PCT/USOI/08611 message. The first zero informs the workflow engine 52 that a new instance must be created for the process. The one informs the workflow engine 52 that the incoming message 74 is associated with the first task of the "Purchasing Process" workflow. The second zero informs the workflow engine that the task instance is the first instance of the task for this workflow. This protocol format...

...with each message in both the incoming queue and the outgoing queue. After receiving the incoming message 74, the workflow engine 52 creates a new process instance for the purchase requisition workflow. As described above, the workflow engine 52 will assign a process instance ID (PIID) for the process ID (PID) that corresponds to the purchase requisition workflow. This allows the workflow engine 52 to simultaneously process two or more purchase requisition workflows. The set of information for the purchase request task I 1 0

indicates that in the process database 56 the purchase request task
1 10 has post-role actions assigned for the workflow engine 52 to
perform. For this example, the post-role action is testing whether the
purchase amount is under a certain dollar amount. In the current example,
the workflow engine 52 accesses the data element sent in the
incoming message or a location for storing the dollar amount in the
existing computer infrastructure to calculate whether the cost is equal
or greater than $5,000. If so, the WO 01/69431 PCT/USOI/08611 attributes
to retrieve the data elements for the purchase requester task 1 1
0. These data elements may be available in RAM or obtained from
non-volatile memory.
Using the requester name, the workflow engine 52 may query an external
database 70 specified during creation of the manager approval task 114
using the modeling tool 60. This process will be described in
detail in FIGURES 10 For this example, the "human resource database" is
accessed and queried using the Structured Query Language (SQL) to
retrieve the immediate manager and the corresponding e-mail address for
the immediate manager. The next pre-role action defined in the
process database 56 for the manager approval task 114 is to send an
email message to the immediate manager with a uniform resource locator
(URL) pointing...

...mail message is then recorded along with a timestamp in the message
database 62. The workflow engine monitors the out message queue and
replaces the data elements with desired values and then sends the
out message to a next workflow participant. This processing is described
in detail in FIGURE 18. It should be appreciated by those skilled in the
art that the e-mail message may comprise other types of information
than a URL. For instance, as described below, an MHTML encoded page may
be transmitted containing a script. A reply to the message may then...

...workflow engine 52 continuously processes any other messages in the
incoming message queue and outgoing message queue. Once the immediate
manager has input the necessary information into the approve form
and selected an Approve or Reject button on the form, the completed form
is sent in the same manner as the...window 250 is the default window that
appears when a particular task is selected. If the workflow administrator
66 has not previously entered any task information in the general
task window 250 associated with the selected task, the text boxes and
display windows of the general task window 250 do not contain any
information. However, as one skilled in the art will recognize,
default data may be specified and automatically entered into any
edit box or display window. If the general task window 250 is not the
window displayed, the...

...and click operation or other selecting operation. Upon selection of the
general tab, the present invention executes instructions that provide a
display for entering task information. The general task window is
used to define the pre-role actions for tasks.
The general task window 250 includes a task name edit box...

...edit box 264 is an English translation of the business logic for the
named task. In addition, the general task window 250 includes a task
data edit box 266 and a data elements available window 268.
The text entered in the task data edit box 266 may be written using
a task scripting language. In one embodiment, the scripting language

requires the WO 01/69431 PCT/USOI/08611 administrator 66, in the
data elements available window 268 to aid in the specification of
the location for the data elements 272 of the named task. For
example, the workflow administrator 66 may position the cursor over the
PR:ItemCost(integer) item in the data elements available window 268
and drag and drop the PR:ItemCost(integer) item to the task data
edit box 266 after the "ItemCost=" entry. The modeling tool 60 then
executes instructions that formats the location according to proper
scripting rules. The workflow administrator 66 may also just type the
necessary information after the "ItemCost=" entry rather than using
the drag-and-drop operation. Adding locations, such as shown generally at
278, for the task data element 272 may be entered by inserting a
separator 276, "I", after any previously entered location, such as shown
generally at 274, and adding text...

...276 signals the WO 01/69431 PCT/USOI/08611 "TASK:MAEscl.newEmail"
indicates to the workflow engine 52 that the task named MAEscl has a
data element newEmail that has a location defined for it. The to
FIGURE 5B and 7.
The task edit box 266 may also include a procedure...

...as
"ReportDataElements(" that signals the workflow engine 52 to execute
additional instructions for the named task. In the example,
"ReportDataElements(" records the value of the data elements for
the named task in a log file to aid in debugging. The data elements
available window 268 may also include global variables, shown generally
at 293. In one embodiment, global variables have a unique identifier,
such as a I" as the first character. These global variables are defined
by the workflow administrator 66 similar to the definitions for task
data elements 272. After the necessary pre-role actions of the
named task are completed, the WO 01/69431 PCT/USOI/08611 The fixed role
does not change throughout any workflow processing. For a variable role,
the workflow administrator 66 enters the data element 272
associated with the role 280 in the role string edit box 302 of FIGURE 6.
The workflow data element may then be changed by different tasks
depending on the assigned role in a particular situation (see FIGURE 5A).
The data elements 272 must have been previously defined during the
creation of data elements described above in reference to ...250.
The other role options are provided by selecting one of the buttons 306,
308, 310 that active a dialog box to enter the requested
information. For an absolute role, a functional name for the role
is provided, such as "head of marketing" that is saved in the
process database. During runtime, the workflow engine 52 retrieves
the current head of marketing from a specified database field. For a
relative role, a relative association is specified in the dialog box,
such as "requester's manager". The button 324 or the do not use
data element button 326. If the use data element button 324
is selected, the workflow administrator 66 enters the previously defined
data element 272 that specifies the number of minutes before
initiation of the named task. If the do not use button 326 is selected,
the number of minutes is determined by a fixed value assigned during the
definitions for the general task window 250 of FIGURE 5A (i.e., "Y"). The
data element 272 for the number of minutes is used by the workflow
engine 52 during processing to determine whether a linked task has
completed in...

...sending a notification message to the workflow participant 68 assigned to the linked task. The current task window 330 provides a graphical display of the data elements 292 previously defined for the named task. After the escalation task has been defined, the workflow administrator 66 may select the document tab 258...

...edit box 338 specifies a physical location for the document. The physical location is necessary so that the document may be parsed to identify any data elements that are then displayed in retrieved data element window 350. The present invention uses a built-in object browser to detect and use registered COM objects and to determine the workflow data elements in the specified document. FIGURE 20 illustrates an illustrative display of the built-in object browser 352. This allows the present invention to map to the existing computing infrastructure without replicating the data. The built-in object browser in combination with the Open Database Connectivity (ODBQ compatible applications allows all the properties, methods and events of external objects to be represented graphically in the retrieved data elements window 350. The workflow administrator 66 also enters a standard URl, in the URL edit box 340. The URL specified in the URL edit...

...document window 348 performs a browser type feature, such as displaying contents of the document specified in the URL edit box 340, to aid the process. The workflow administrator 66 may then select the action tab 260 that causes the present invention to execute instructions for displaying an action window 360...

...screen display for an action window is shown in FIGURE 9A. The action window 360 includes an action list window 362 and an action list data elements available window 364. The action list data elements available window 364 provides a hierarchical tree structure of the available data elements of the named task (shown generally at 290). The data element "$count" is shown as a branch from a route process entitled "Process-Data". This indicates that $count is a global data
,
element that is available to all the tasks of the named process. The present embodiment includes a "ResolvedRole" data element for each task. The "ResolvedRole" data element contains the e-mail address of the responsible WO 01/69431 PCT/USOI/08611 embodiment, the process database 56 is Open Data Base Connectivity (ODI3C) compliant. The information in the process database 56 includes task names, activities for each task, data elements, routing information and rules. The process ID and consecutive task ID number is stored in the process database 56 for later retrieval by the workflow engine 52 when determining the next action or task to be performed in the workflow process.
According to an embodiment of the present invention, the modeler may include a menu item or button for displaying versioning options. An illustrative versioning window 681 is shown in FIGURE 68. Using the versioning window 681, the workflow administrator 66 may specify how new versions of a workflow process should be handled by the modeler. In

particular, the workflow administrator 66 may select one of the process versioning options 682 for adding the current version of the process as a new version. The workflow administrator 66 may also select one of the process versioning options 682 for replacing the last version of the workflow process with the version of the process currently being edited by the workflow administrator

66 Additionally, the workflow administrator 66 may select one of the process versioning options 682 for deleting all of the previous versions of the process and saving the current version of the process as a new version. Utilizing'the versioning window 6 8 1, the workflow administrator 66 may also select the version effective date 683. In particular, the workflow administrator 66 may select an option for making the current version of the process effective immediately. Alternatively, the workflow administrator 66 may select a future date on which the version of the process should become active. In this manner, the WO 01/69431 PCT/USOI/08611 FIGURES 10-18 are flowcharts illustrating the processing performed by the WO...

...proceeds to block 440.
At block 440, the workflow engine 52 determines whether a role or a document is defined for the current task. The process for defining a role or document for an activity is described in detail above with reference to FIGURES 5A, 6 and 8. If a role...

...document is defined, the logic proceeds from decision block 440 to block 442 where the workflow engine 52 defines a role by parsing the "role" data element as previously described in FIGURE 5A and 6. The logic then proceeds to resolve the role at block 444. As described earlier, the role...

...to block 446 where a document template is created. The document template, such as Manager Approve.asp defined in FIGURE 8, does not have any data elements resolved at this time. The logic then proceeds to decision block 448 where the workflow engine 52 determines whether there is an escalation task...

...block 448 to block 452. At block 452, the workflow engine places an outgoing message 76 in the outgoing message queue. FIGURE 12 is a process for executing a route suitable for use in block 426 of FIGURE 1 1. In general, the process for executing a route occurs when the workflow engine 52 encounters a ROUTE keyword as shown in the action list window 362 of the action...

...route and records the route in the instance database 58 so that the workflow engine 52 maintains a status for the workflow. The execute route process starts at 460 and proceeds to decision block 462 where the workflow engine 52 determines whether a route needs to be initialized. The route must...

...route that depend on a different routing rules do not initialize the route again. The instance database 58 may include several tables for storing routing information. It will be apparent to one skilled in the art that the architecture for these tables may be done in several different ways. As will rule. The routing rule is obtained from the

stored set of information in the process database 56.
For example, as shown in FIGURE 4, the route links 100, 106 for the
Approve Request task 1 12 are from the purchase...

...1 12, the WO 01/69431 PCT/USOI/08611 database 58 contains the prior
actions completed by the workflow engine 52 for various tasks and
data elements 272 for various tasks. If the current task must wait
until a different task has completed, the workflow engine 52 looks
through the instance...

...determined not to be met, the logic proceeds to decision block 474 where
the workflow engine 52 deterinines whether there are any more rules to
process before starting the next task. If there are, the logic
cycles back to block 468 to get the next routing rule and proceeds as
described...

...a flow diagram illustrating a pr'ocess for executing an object suitable
for use in block 428 of FIGURE 1 1. The executing object task
process starts at 480 and proceeds to block 482 where the workflow
engine 52 defines input data elements 272. During block 482, the
workflow engine 52 formulates the input parameters for an object driver
from the data elements and values that were sent in the incoming
message or retrieved in some manner. The logic then proceeds to decision
block 484 where the...

...of the objects shown in blocks 486-494 is also well-known in the art. In
general, each object driver executes code that generates output
data elements that are returned to the workflow engine 52 at block
496.
According to an embodiment of the present invention, the workflow engine
may also cause a data interchange operation to be executed. At
block 495, the data interchange operation is identified and
executed. An illustrative routine for executing the data
interchange operation is show in FIGURE 66. Referring now to FIGURE 66,
the routine 660 for executing a data interchange operation will be
described. Routine 660 begins at block 664, where the operation
identification number associated with the data interchange
operation is transmitted to an operation resolver. As will be described
in more detail below with respect to FIGURE 57, the operation resolver
performs the actual data interchange operation. From block 664, the
routine 660 continues to block 666, where the workflow engine saves a
message in the instance database indicating that...

...the routine 660 continues to block 668, where it returns to block 498,
shown in FIGURE 13. Referring again to FIGURE 13, after the output
data elements have been obtained, the logic ends at 498 and returns
to decision block 438 in FIGURE 1 1. FIGURE 14 is a flow diagram
illustrating a process for executing a database call suitable for
use in block 430 of FIGURE 1 1. The execute database call
process 500 proceeds to block 502 where Standard Query Language
(SQL)
statements are created according to the set of infort-nation in the
process database for the current task. The logic then proceeds to
block 504 where the workflow engine 52 creates a connection string and to
block 506 where the SQL is executed. Blocks 502, 504, and 506 are
well-known in the art. The database call then returns the output
data elements to the workflow engine 52 at block 508 and the logic

ends at 5 1 0 and returns to decision block 43 8 in...

...database connection caching occurs once the database call to the external database occurs. Typically, this occurs during the execution of activities. FIGURE 15 illustrates a process for executing an expression suitable for use in block 432 of FIGURE 1 1. The execute expression starts at 520 and proceeds to block 522 where the workflow engine 52 defines the data elements 272. The logic then proceeds to block 524 where the workflow engine 52 assigns each data element a source. For example, the workflow engine may access the instance database 58 to locate a value for a data element and add one of the defined data elements of block 522 to the retrieved data element to generate the output data element of block 526. After this is completed, the execute expression process is complete at 528 and the logic returns to decision block 438 in FIGURE 1 1. FIGURE 16 is a flow diagram illustrating a process for executing internal logic suitable for use in block 434 in FIGURE 1 1. In general, the process for executing internal logic evaluates expressions to test whether an expression is true or false. For example, in FIGURE 9B, the internal logic executed for...to the end at 576 and then returns to decision block 43 8 in FIGURE 1 1. FIGURE 18 is a flow diagram illustrating a process performed by the WO 01/69431 PCT/USOI/08611 encrypt incoming and outgoing process requests. Example security protocols include x.509, New Technology Lan Manager (NTL) and Kerberos. It will be apparent to those skilled in the art the...

...in further detail. After invoking the message protocol, the logic proceeds to block 592 where the workflow engine 52 generates the document by replacing the data elements 272 of the document template that was created in block 446 in FIGURE 1 1 with derived (resolved) values as defined in the process database for the document. The logic then proceeds to block 594 where the workflow engine 52 sets the driver settings for a target destination and...

...on the network illustrated in FIGURE 1. The logic then proceeds to block 596 where the workflow engine 52 activates the driver and sends the information to the target destination. The logic then proceeds to decision block 598 where the workflow engine 52 determines whether there is an error. If there...

...one, two or three servers and the workflow engine resides on one or more servers. FIGURE 21C illustrates a multi-message queue, multi-engine, single process database instance database topology in which there is one instance of the process database and instance database (may reside on one or two servers) and the workflow engine and multimessage queues reside on one or more servers. FIGURE 2 1 D illustrates a multimessage queue, multi-engine, multi-instance database, single process database topology in which there is one instance of the process database. FIGURE 21E illustrates a multi-component topology in which all components may reside on one or more servers. Other topologies not illustrated in FIGURES 21A-21E are envisioned such as a split engine - database topology in which the process database and instance database reside on one or more servers other than the server with the workflow engine. The message queue, process database and instance database may reside on one or more separate servers running on the same or different type of database server.
Using these topologies...

...message queue when the
message router completed an activity. The message router component reads
incoming messages, initiates the activities based on the stored set of
information that defines the sequence of tasks for completing the
work flow, routes the activities to a software application running on one
of the network devices...to distribute message processing when the
present invention is in multiengine topologies, such as FIGURE 21B-21E.
The present invention also provides caching of the process database
56. In one embodiment, the complete process database 56 is cached
in memory before the WO 01/69431 PCT/USOI/08611 cached active data
later for evaluating rules, such as AND/OR rules, when determining
whether a task may be started. As explained above, the process
database 56 includes several tables that store the set of
information used in processing the workflows. Because the size of
the process database (the tables) is known at the time of caching,
static hashing techniques are used. The tables are hashed and once the
task is found, the workflow engine uses the pointers to find the
data elements corresponding to the found task. In general, hashing
is well understood by those of ordinary skill in the art and need not be
discussed...

...a hashing technique called Linear Probing is used. Linear Probing allows
a hash table to be approximately 20% larger than a task table in the
process database. This balances memory usage and performance for
the system.
The linear probing used in the present invention is provided below:
CN Average number ofprobesfor...

...follows that:
CN;z:@ I 1 + (3)
2 I-a)
When the table is 80% full, the Linear Probe algorithm provides fetching
of the required data in less than three table lookups in most
cases.
The incoming messages from the incoming message queue may also be
hashed. However, because the message...

...database may also be hashed. Again, the instance database is dynamic
because the size of the hash tables are not known in advance because new
data is added and deleted from the instance database as a
process proceed from one task to the next task. Therefore, dynamic
hashing techniques are used in the present invention for caching the
instance database. These techniques...

...a database connection manager 550, an archive manager 552. The database
connection manager 552 is used by the workflow administrator 66 to
identify the ODBC data source names for entry in the instance
database 58 and the message database 54. The workflow administrator 66
uses the administration tools 66 to supply information, such as
SMTP server and other directory information, that is recorded in
the process database 56 along with information created
through the modeling tool 60.
The archive manager 550 performs garbage collection on the instance
database 58 and the message database 54 during run...

...mentioned earlier, when a business workflow has completed all the
business rules associated with it, the workflow instance that was created
by the Automated Business Process Service According to an
embodiment of the present invention, an automated business process
service is provided. As shown in FIGURE 22A, a commerceroute server 700
is provided that is connected to the Internet 704 or other distributed
computing...

...702N may access commerceroute server 700 and automate business processes
between each other. As described in additional detail below,
commerceroute server 700 may maintain subscription information for
each subscribers 702A-702N, and bill subscribers ...and routine 708
branches to the appropriate block for handling the selected menu item. If
the subscriber has selected a menu item for creating a data
interchange operation, routine 708 branches to block 704. As will be
described in more detail below, a data interchange operation is a
move and/or transform operation that can retrieve a source object at a
source object location, perform a transformation on the source object to
create a target object, and save the target object at a target object
location. An illustrative routine for performing a data interchange
operation is, described below with respect to FIGURE 30. If, at block
722, it is determined that the subscriber has selected a menu item for
billing, routine 708 branches to block 728. An illustrative routine for
billing a subscriber and providing the subscriber with billing
information is described below with reference to FIGURES 25A and
25B. If, at block 722, it is determined that the subscriber has selected
a menu item for modeling a business process, routine 708 branches
to block 734. At block 734, the subscriber is permitted to use the
modeler application program to model business
processes, as described...

...now to FIGURE 24, an'illustrative routine 740 for registering a new
subscriber will be described. Routine 740 begins at block 746, where new
subscriber information is received. New subscriber
information may include the subscriber's company name, contact
name, business address, billing address, telephone number, email address,
and other information necessary to bill the subscriber for use of
the automated business process service. From block 746, routine 740
continues to block 748, where a new subscriber identification ("ID")
number is created for the subscriber. As will be...

...number is utilized by the commerceroute server 700 to keep a record of
all operations performed on behalf of the subscriber and to create
accounting information necessary to bill the subscriber for
executing WO 01/69431 PCT/US01/08611 For instance, a subscriber may be
billed on a per-operation basis...

...it returns to block 720, shown in FIGURE 23.
Referring now to FIGURE 2513, an illustrative software architecture for
providing billing in an automated business process service will be
described. As discussed above, a system log 782 is maintained which
contains a complete record of operations performed on behalf of each...

...an accumulator 786 may be designed to execute those operations as
requested to provide access to the subscriber's bill in a real time
fashion.

Data Interchange Operations

As described above with reference to FIGURE 23, a subscriber may select a menu item for creating or editing a data interchange operation. Generally described, a data interchange operation is an automated process for retrieving a source object at a source object location using a protocol, performing a transformation/mapping operation on the source object, and saving the resulting target object in a target object location. As shown in FIGURE 26, according to an embodiment of the invention, the data interchange operation is performed by an application program called an operation resolver 792. In general, the operation resolver 792 utilizes a data interchange operation definition provided by a subscriber to locate a source object 794 at a source object location 796. The operation resolver 792 may retrieve...

...the operation resolver 792 is described in more detail below with respect to FIGURE 57.

Referring now to FIGURE 27, an illustrative system for performing data interchange operations will be described. In order to enable the use of data interchange operations within an automated business process system, a Web data interchange ("VVDI") server 814 is provided. As will be described in more detail below, the VYTD1 server 814 comprises a general purpose computer connected to...

...pages to a user of a client computer 816. Utilizing a client computer 816, a user may access the WDI server 814, and define, edit, schedule, and save data interchange operations.

Once a user has created a data interchange operation, a data interchange operation definition may be saved in the WDI database 818. The WDI database may be accessed by the VVDI server 814 to permit editing of the data interchange operation definition at a future time, may be utilized by the scheduler 820 to schedule data interchange operations, and may be utilized by the operation resolver 792 to execute data interchange operations.

Through the WDI server 814, the user may access the scheduler 820 for scheduling data interchange operations. As will be described in more detail below with reference to FIGURE 41 , once a schedule has been defined, the scheduler 820 can utilize the schedule to trigger the execution of data interchange operations. Generally speaking, the scheduler determines whether a particular data interchange operation should be executed and, if so, retrieves the data interchange operation definition from the WDI database 818. The scheduler then transmits a message to the message database 54, which as described above is monitored by the workflow engine 52. The workflow engine 52 then retrieves the message and determines that the message contains a request for execution of a data interchange operation. In response, the workflow engine 52 transmits a request to the operation resolver 792 to perform the data interchange operation. The operation resolver 792 retrieves the data interchange operation definition from the WDI database 818, and performs the data interchange operation. As generally described above, the operation resolver utilizes a set of protocol objects 824 to retrieve a source object 794 at a source location. Using the data interchange

operation definition, the operation resolver then performs a specified transformation/mapping operation on the source object to create a target object 812. Again, using...

...object 812 at a target object location. The operation resolver 792 then transmits a message to the workflow engine 52 indicating whether or not the data interchange operation was successfully completed.
According to an embodiment of the invention, a task within a workflow process defined in the modeler may be defined as a data interchange operation. In this manner, the workflow engine may trigger the execution of data interchange operations on the operation resolver 792 as part of its normal processing of workflow processes as described above. Furthermore, a user of the client computer 816 utilizing VV-DI server 814 may also cause a data interchange operation to be executed utilizing a command available at the NVDI server 814.
Additionally, a user of the client computer 816 may utilize an...system ("BIOS") 830 is also provided for controlling the low-level operation of WDI server 814.
The mass memory also stores the program code and data for providing a
WWW site for defining and utilizing data interchange operations.
More specifically, the RAM 832 stores a WWW server application program 836 as known to those skilled in the art. The WWW server...

...client computer 816 may also be equipped with a network interface unit 894 or modem capable of connecting to the Internet through a point to point protocol ("PPP") connection or a SLIP connection as known to those skilled in the art.
The client computer 816 also includes a ROM BIOS 866, central processing unit...

...server 814 and client computer 816 is described in more detail below.
Referring now to FIGURE 30, an illustrative routine 900 for creating, editing and scheduling a data interchange operation will be described. Routine 900 begins at block 902 and responds to the selection of the data interchange menu item shown in FIGURE 23. In response to the selection of the data interchange menu item, a data interchange menu is displayed to the user. The data interchange menu includes menu selections for creating and modifying accounts, projects, sources, operations, targets, schedules, definitions, and for monitoring the status of the workflow engine. At block 904, a selection of one of the foregoing menu items is received from 906, it is determined that the user has selected a menu item for creating and editing data interchange operations, routine 900 branches from block 906 to block 914. An illustrative routine for creating and editing data interchange operations is described below with reference to FIGURE 34. If, at block 906, it is determined that the user has selected a menu item...

...with reference to FIGURE 3 8. If, at block 906, it is determined that the user has selected a menu item for creating and editing schedules, routine 900 branches from block 906 to block 918. An illustrative routine for creating and editing schedules is described below with reference to FIGURE 41. If, at block 906, it is determined that the user has selected a menu item for creating...

...to FIGURE 3 1, an illustrative routine 95 0 for creating and editing accounts will be described. Routine 950 begins at block 954, where a process tree is displayed. The process tree illustrates a hierarchy of accounts, projects, and operations, in a tree format. Accounts are the top-level folders in the account management hierarchy. Accounts hold projects which, in turn, hold collections of related operations. The process tree contains all accounts, projects, and data interchange operations accessible to the current user. If no accounts, projects or data interchange operations have been created by the user, the process tree will be empty. Likewise, if the user has not been granted access rights to view, edit, or delete accounts, the process tree will be empty. Routine 950 continues from block 954 to block 956, where user input is received selecting a portion of the process tree. At block 958, a determination is made as to whether the user has selected an existing account in the process tree. If the user has selected an existing account in the process tree, routine 950 branches to block 960. At block 960, the account details associated with the selected account are displayed and the user is permitted to...

...user chooses to use the new operation "wizard", new account details are received from the user at block 968. New account details may include such information as account name, account description, account number, a street address to be associated with the account, and a contact name. From block 968, routine 950 continues to block 970, where the new account details are saved in the WDI database. The process tree is also updated to reflect the new account. From block 970, routine 950 continues to step to block 972, where it returns. Referring now to...

...to the client computer 816, and displayed by the WWW browser 870. As described above with reference to FIGURE 31, the screen display shows a process tree 980 which includes a listing of the accounts, projects and data interchange operations available to the currently logged-in user. The accounts, projects and data interchange operations are shown in the process tree 980 with the accounts at the highest level, the projects nested one level, and the data interchange operations nested one level below.
When the user selects an account such as "CR demo," the account details regarding the selected account are shown...

...step-by-step procedure for creating a new account. Once the user has created a new account, the new account will be reflected in the process tree 980.
Referring now to FIGURES 33 and 35, an illustrative routine 1000 for creating an editing projects will be described. Projects are groups of related data interchange operations. Routine I 000 begins at block 1004, where the process tree 980 illustrating accounts, projects and data interchange operations is displayed. At block 1006, user input is received. From block 1006, routine 1000 continues to block 1008, where a determination is made...

...user may choose to use the project wizard to create a newproject. Fromblock1016,routine1OOOcontinuestoblock1O18,wherethenew project details are saved in the WDI database 818. The process tree 980 is also updated to reflect the new project. From block 1018, routine 1000 continues to block 1020, where it returns.

Referring now to FIGURES 34 and 36, an illustrative routine 1050 for creating and editing data interchange operations will be described. As described generally above, a data interchange operation is an operation by which a source object located at a source location may be transformed and saved as a target object at a target location. By utilizing the illustrative routine 1050, a user may provide all of the information necessary to create a data interchange operation definition. Routine 1050 begins at block 1054, where the process tree 980 is displayed. From block 1054, routine 1050 continues to block 1056 where user input is received. At block 1058, a determination is made as to whether user input was received selecting an existing data interchange operation shown in the process tree 980. If an existing data interchange operation was selected by the user, routine 1050 branches to block 1060 where the operation details and definitions for the selected data interchange operation are displayed.

As shown in FIGURE 36, operation details include an operation name 1088, an operation description 1090, and an operation type 1092. Operation definitions may include a source object 1096, a target object 1106, and a transformation 1108 to be performed on the source object. Additionally, the data interchange operation definitions may include a schedule 1098 describing when the data interchange operation should be performed. Moreover, a success message 1,100 and a failure message I 1 1 0 may be defined for transmitting a message in the event of success or failure of the data interchange operation, respectively. Likewise, a success operation 1102 and a failure operation 11 12 may be specified for performing another data interchange operation in the event of success or failure of the selected data interchange operation, respectively. Similarly, a success workflow 1104 and a failure workflow 1114 may be defined for performing an entire workflow in the event of success or failure of the selected data interchange operation, respectively. In this manner, a data interchange operation may be utilized to trigger another data interchange operation or an entire workflow in the event of its success or failure. It should be appreciated that the user may only select from source objects, target objects, transformations, schedules, and success/failure operations and WO 01/69431 PCT/USOI/08611

Referring again to FIGURE 34, at block 1060 the user may be permitted to edit the data interchange operation definitions. At block 1062, the updated data interchange operation definition is saved in the WDI database 818. From block 1062, the routine 1050 continues to block 1076 where it ends. If, at block 1058, it was determined that the user did not select an existing data interchange operation, routine 1050 continues to block 1064, where a determination is made as to whether the user has selected an option for creating a new data interchange operation. If such a selection was made by the user, routine 1050 branches to block 1066 where operation details for the data interchange operation are received from the user. As described above, operation details may include an operation name 1088, an operation description 1090, and an operation ...

...the operation definitions are received from the user. At block 1070, the operation details and definitions are saved in the WDI database 818 as a data interchange operation definition. From block 1070, routine 1050 continues to block 1076, where it returns. It should be noted that the

user may utilize a new data interchange operation wizard 1094 to create a new operation in an easy-to-use fashion similar to that described above with respect to the creation of accounts and projects. If, at block 1064, it is determined that the user has not selected an option for creating a new data interchange operation, routine 1050 continues to block 1072. At block 1072, a determination is made as to whether the user has selected a user interface...

...16 for performing the selected operation immediately. If the user has made such a selection, routine 1050 branches to block 1074, where the currently selected data interchange operation is transmitted to the message database for immediate execution. The user may also be provided with feedback as to whether the operation was...Referring now to FIGURES 38 and 40, an illustrative routine 1200 for defining target object locations will be described. A target object defines where transformed data will be sent (e.g., to a different FTP location, in a file share directory, in a database, etc.) According to an embodiment of the...

...location details may include an FTP host 1266, an FTP host path 1268, a file name 1270, a login 1272, and a password 1274. This information specifies an FTP host and path where the target object should be saved. Additionally, the user may indicate whether encryption 806 should be performed on the target object prior to saving at the target object location. Methods for electronically encrypting data in this manner are well known to those skilled in the art. Additionally, ...comprise an SMTP server. By utilizing an SMTP server as a target object location, e-mail messages may be sent as a part of the data interchange operation, as compared to simply saving a file at a target object location. At block 1212, the updated target details are saved in the...

...definition is received from the user. As described above, the contents of the target object definition will depend on the target type, and will include information necessary to connect to the target location and save the target object. At block 1222, the new target object name, target object type, and target...

...1232, routine 1200 continues to block 1234, where it returns. Referring now to FIGURES 41 and 42, an illustrative routine 1300 for creating and editing data interchange operation schedules will be described. According to an embodiment of the present invention, a user may select a menu item
@@A A,rZ@, @1,A,1@@ T@ +

  I 1 '14@" n
modify these items to customize the schedule for their particular needs. For instance, the user may modify the occurrence pattern 1354 to specify that the data interchange operation occur daily, weekly, monthly or every number of days specified by the user. Likewise, the user may modify the occurrence frequency 1356 to specify that the data interchange operation occurs once at a specified time or that it occurs every number of hours, minutes, etc., specified by the user. Furthermore, the user may modify the duration 1358 to specify that the data interchange operation start on a given date and end on a given date, or continue without duration. Once the user has modified these items to

customize the schedule to their preferences, the updated
schedule is saved in the WDI database 818 at block 1312. From block
1312, the routine 1300 continues to block 1326, wherein it returns. If,
at block 1308, it is determined that the user has not selected an
existing schedule, the routine 1300 continues to block 1314. At
block 1314, a determination
is made as to whether the user has selected an option

for creating a new schedule. If
such input is received from the user, routine 1300 branches to block
1316, where the new schedule name 1352 is received from the user.
At block 1318, the occurrence pattern 1354 for the new schedule is
also received from the user. At block 1320, the
occurrence frequency 1356 is received from the user. At block 1322, the
duration 1358 is received from the user. At block 1324, the new
schedule name, occurrence pattern, occurrence frequency, and
duration are saved in the WDI database. At block 1326, routine 1300
returns.
Referring now to FIGURE 43, an illustrative routine 1400 for defining
documents, transformations, process messages and target messages in
connection with a data interchange operation will be described.
Routine 1400 begins at block 1404 where the definitions menu 1474 is
displayed in response to the user's selection of the definitions menu
item. The definitions menu 1474 includes tabs for defining documents,
transformations, process messages, and target messages. At block
1406, user input selecting one of the menu items from the definitions
menu 1474 is received. At block 1408...

...target messages is described below with reference to FIGURE 47.
Likewise, if at block 1408 it is determined that the user has selected
the define process messages menu item, routine 1400 branches to
block 1416. An illustrative routine for defining process messages
is described below with reference to FIGURE 51. If, at block 1408, it is
determined that the user has selected a menu item for...The document
definition may include a document name 1478 and a document type 1480.
Depending on the document type 1480 selected by the user, additional
information may be provided as a document type definition 1482.
For instance, if the user chose a delimited document type 1480, a
delimiter 1484 may be required to indicate the character that separates
the fields of the document. Moreover, additional information may
need to be provided as part of the document type definition 1482 to
ftuther define the docunient. In this example, a field name, sequence...

...the document and their types. By selecting an add records user interface
button, additional fields may be added until the document is accurately
described. Additional information may be necessary for other
document types as is known to those skilled in the art. Once the user has
edited the document type definition...

...1480 is also received from the user. At block 1470, the document type
definition is received from the user. As described above, the type of
information required to define the document type'definition will be
dependent on the document type 1480 specified by the user. At block 1472,
the new document...

...The routine 1500 provides the user the ability to create and edit

transformations that will be applied to documents located at source
object locations during data interchange operations.
Routine 1500 begins at block 1504, where the previously defined and
available transformations are identified in the transformations list
1530. At block 1506...

...be mapped to each other, and documents can be transformed from one for
-mat to another. The user then may customize the transformation of the
data contained in the selected source field 1536 to the selected
target field 1538 by selecting the formula user interface button 1544. hi
response to the...user may select a "next" user interface button to
continue to the next screen of the "wizard." FIGURES 48C and 48D
illustrate performing this mapping process for target objects in a
like fashion. Once the user has mapped parent and child fields of the
source object and of the target object...as the to field 1584, the
subject field 1588, and the message text 1590. It is important to note
that the user may specify that data contained in the source object
be used to complete the fields of the target message by specifying a
variable. For instance, in the to field...

...Routine 1550 then continues to block 1568, where the identity of the
SMTP mail server 1582 is received from the user. At block 1570,
destination information such as the to field 1584 and the subject
field 1588 are received from the user. Additionally, the user may specify
carbon copy recipients and...
...messages list 1578. At block 1576, the routine 1550 returns.
Referring now to FIGURES 51 and 53, an illustrative routine 1600 for
creating and editing process messages will be described.
Process messages are messages that may be sent in response to the
success or failure of a data interchange operation, such as the
success messages and failure messages described above with reference to
FIGURE 36. Routine 1600 is executed in response to the selection of the
process messages tab from the definitions menu 1474. Routine 1600
begins at block 1604 where the previously created process messages
that are available to the user are displayed as a process messages
list 1676. Routine 1600 continues from block 1604 to block 1606, where
user input is received. At block 1608, a determination is made as to
whether the user has selected an existing process message from the
process messages list 1676. If the user has made such a selection,
routine 1600 branches to block 1610, where the selected process
message is displayed and user edits are received. The process
message may include a message name 1678, an SMTP mail server 1680 from
which the message should be sent, and other information necessary
to send the process message. For instance, the message may include
a to field 1682, a subject field 1684, and a text message 1686.
Additional fields may include carbon...
...failure identifier so that the message may be identified as a success
message or a failure message. Once the user has completed editing the
selected process message, the routine 1600 continues to step 1612,
where the edits are saved in the VVDI database 818. Routine 1600 then
continues to step 1626, where it returns. If, at step 1608, it is
determined that the user has not selected an existing process
message from the process messages list 1676, the routine 1600
continues to block 1614. At block 1614, a determination is made as to
whether the user has selected an option for creating a new process
message. If the user has selected such an option, the routine 1600

branches to block 1616, where a success or failure identifier is received from the user. As described above, the success or failure identifier may be included in the message name 1678 to identify the process message as a success message or a failure message. Routine 1600 then continues to block 161 8, where the message name 1678 and the SMTP...

...1684 are received from the user. Additionally, a "reply to" field may be specified by the user to indicate where a reply message to the process message should be transmitted. Routine 1600 then continues to block 1622 where the message text 1686 is received from the user. At block 1624, the new process message is saved in the WDI database 818 and reflected in the process messages list 1676. Routine 1600 then continues to block 1626, where it returns. Referring now to FIGURES 52, 54, 55, and 56, an illustrative routine 1650 for providing status information will be described. Routine 1650 is executed in response to the selection of the status menu item described above with respect to FIGURE 30. In...to block 1660. At block 1660, the system log 1688 is displayed for the account, project, or operation currently selected by the user in the process tree 980. If an account is selected, the system log 1688 will include all of the projects and operations for the selected account. Similarly, if a project is selected from the process tree 980, the system log 1688 will include all of the operations for the selected project. If, at block 1658, it is determined that the user...

...current operations 1690 is displayed to the user. As described above, the list of current operations 1690 will be determined based upon the selected account, process, or operation selected from the process tree 980. If, at block 1662, it is determined that the user has not selected the pending processes tab from the status menu 1687, routine 1650...

...the operation of the operation resolver 792 (shown in FIGURE 27) will be described. As described above, the operation resolver is responsible for performing the data interchange operations described in interchange operation definitions stored in the WDI database 818. The operation resolver performs the data interchange operations in response to messages received from the workflow engine 52. Accordingly, the routine 1700 begins at block 1704, where the operation resolver receives an operation ID number from the workflow engine. The operation ID number comprises a request from the workflow engine 52 that the operation resolver perform the data interchange operation associated with the operation ID number.

Routine 1700 continues from block 1704 to block 1706, where a determination is made as to whether an operation status flag is set. An operation status flag may be associated with an operation ID number to indicate that a particular data interchange operation should not be performed. This flitictionality may be useful, for instance, where a subscriber to the automated business process system has not paid a bill. If, at step 1706, it is determined that the operation status flag is set, the routine 1700 branches to...

...workflow engine. If, at block 1706, it is determined that the operation status flag is not set, routine 1700 continues to block 1710 where the data interchange operation definition is retrieved from the WDI database according to the operation]ID number passed to the operation

resolver by the workflow engine. As described above with respect to
FIGURE 36, the data interchange operation definition contains all
of the information necessary for the operation resolver to perform
the requested data interchange operation.
From block 1710, routine 1700 continues to block 1712, where the source
object is retrieved from the source location as defined in the data
interchange operation definition. Routine 1700 then continues to block
1714, where the source object may be decrypted, if necessary. Methods and
systems for decrypting data are well known to those skilled in the
art. From block 1714, routine 1700 continues to block 1716, where the
specified transformation is performed on...

...may result in the conversion of a source object to a different format,
change the mapping of the fields in the source object, or other
data transformation as known to those skilled in the art. An
illustrative routine for performing the specified transfortnation is
described below with respect to FIGURE 57A...

...1718 where the target
object is encrypted if required. At block 1720, the target object is
saved at the target location as specified in the data interchange
operation definition. From block 1720, the routine 1700 continues to
block 1722 where a determination is made as to whether the data
interchange operation was successful. If, at block 1722, it is
deten-nined that the data interchange operation was successful, the
routine 1700 branches to block 1724 where a success operation is
perfort-ned as defined in the data interchange operation
definition. A successful operation may comprise the same or another
data interchange operation, and may be triggered by transmitting an
appropriate message to the message database 54. Likewise, at block 1726,
a success workflow may be performed if specified in the data
interchange operation definition. In this manner, an entire workflow may
be executed in response to the success of the data interchange
operation. A workflow may be triggered ...an appropriate message to the
message database 54, as described above. Additionally, at block 1728, a
success message may be transmitted if specified in the data
interchange operation definition. From block 1728, the routine 1700
returns to 1704 to continue processing requests from the WO 01/69431
PCT/USOI/08611 operation definition. Moreover, at block 1734, a failure
message may be transmitted if specified in the data interchange
operation definition. The operation resolver may also log the status of
the workflow operation in the instance database 58. From block 1734, the
routine 1700 returns to block 1704 where additional requests from the
workflow engine to perform data interchange operations are
received.
As described above, a data interchange operation may utilize source
and
target documents in XML format, flat file format, flat database format,
hierarchy file or hierarchy database format, EDI format, or
other similar datafile formats. In order to effect the mapping and
transformations of files in these formats, data is first classified
into two groups, namely, XML or non-XML data. By classifying the
data into these two groups, data transformations may be
performed using only four
methods: XML to XML, XML to non-XML, non-XML to XML, and non-XML to
non-XML...

...write the file. For the remainder of the file formats, an object model, called the Commerce Route Object Model (" CROM") is utilized to handle the data transformation. The CROM includes two kinds of objects, the base object and the container object. The base object is used to store data element information such as a node, a value, or an attribute. Additionally, the base object contains the position information in the data tree, and a flag field to indicate whether the attribute is a primary key or a foreign key, and to show whether the node is a multiple instance node. The container object contains the collection of the root nodes of the tree. The container object also defines methods for parsing the structure file, creating structure trees for mapping, reading data files, and other functions such as searching a data element in the tree. As described above, before a data mapping or transformation operation may take place, a user must define the relationship between a source object and target object. In general, the structure of the data elements is hierarchical. In order to show the structure, CROM creates a browser tree (such as the available source fields 1532) from the structure file, such as an industry standard Document Type Definition ("DTD") for XML, or a proprietary.SCM file for non-XML formats. The.SCM file contains not only the table and CROM information for the data, but also defines the parent/child relationships between tables. Once the user has created the mapping and/or transformation to be applied to the source...

...be appreciated by the reader that for each file format, CROM provides a reading function and a writing function. The CROM first reads the source data and transforms the source data into a common data structure to which the writing application may be applied. By utilizing a common data structure for all file formats, the transformation and mapping process is greatly simplified. The CROM object is used to represent the definition of a mapping and transformation operation, and is called a "STRUCT tree object." A DATA tree object is used to represent the data when a transformation takes place. As will be described in more detail below, the object may comprise a node, the value of the node, or an attribute of a node. The node object may also contain a flag to indicate whether the node object is a single node or a multi-instance node. The routine 1950 begins at block 1954, where the source document at the source location is read. Depending on the source data type, CROM calls a reader to generate a source data tree object. At block 1956, the DTD or SCM file is read. The file is then parsed to create the target STRUCT tree object. At block 1958, the target STRUCT tree object is "walked" to visit each node in the tree. Walking a tree in this manner is well know to those skilled in the art. At block 1960, each node in the tree is identified, and for each node blocks 1962–1968 and blocks 1974–1982 are performed. Blocks 1962–1968 are performed if the node comprises a multi-instance tree object. Blocks 1974–1982 are performed if the node is a single instance node. If a determination is made that the node comprises a multi-instance STRUCT tree object, the routine 1950 branches to block 1964 where the mapping definitions for the node are collected and analyzed. At block 1966, the deepest descendant child node of the tree object is identified. At block 1968, blocks 1978, 1980, and 1982 are performed for each descendant

child node to create a data node object. Once these
blocks have been performed for each node, the routine 1950
continues to block 1970 where the target object is written at the target
location.
If a node is determined to be a single

instance node, the routine 1950
branches from block 1960 to block 1976, where a target data
node object is created. At block 1978, all mapping definitions of
the node value and its attributes are defined. At block 1980, all
source data elements appearing in the mapping definitions are
identified and the source data elements are defined from the source
data tree object. At block 1982, the specified
transformation is called to define the target value and its attribute in
the target object. At block 1970, the...

...of the scheduler 820 (shown in FIGURE 27) will be described. As
described above with respect to FIGURES 41 and 42, the user may define
schedules for the execution of data interchange operations.
The scheduler 820 is operative to receive the schedules defined by
the user and to perform the data interchange operations at the time
periods specified in the schedule. Routine 1750 performs this
functionality. Routine 1750 begins at block 1754, where the
schedule retrieves the current time. At block 1756, the
schedule retrieves the occurrence schedule from the WDI
database 818. As described above with respect to FIGURES 41 and 42, the
occurrence schedule defines the times at which the data
interchange operation should be executed.
Routine 1750 continues from block 1756 to block 1758 where a
determination is made as to whether any scheduled operations...

...to whether an operation status flag is set associated with a scheduled
operation. As described above, if an operation status flag is set for a
data interchange operation, that operation should not be perfonned.
Therefore, if an operation status flag is set, the routine 1750 branches
to block 1762, where the scheduled operation may be skipped. If an
operation status flag is not set for the scheduled data interchange
operation, the routine 1750 continues to block 1764 where the scheduled
data interchange operations are executed. As described above,
data interchange operations may be executed by the schedule
by transmitting an appropriate message to the message database 54 which
causes the workflow engine to execute the scheduled data
interchange operation.
Server Administration
In order to monitor and administer the operation of the workflow engine
52, a menu option for server administration may be provided to users of
the automated business process system. Referring now to FIGURE 59,
an illustrative routine 1800 for administrating the operation of the
workflow engine 52 will be described. Routine 1800 begins at block 1804
where a login is received from a registered subscriber of the automated
business process system. Once a valid login has been received,
routine 1800 continues from block 1804 to block 1806, where a selection
is received from the server...

...1824 is displayed in FIGURE 60, and includes a list of all operations
performed by the system. The system log 1824 may also include the

data and time the operations were performed, the source object, error codes, and other status messages associated with each operation. According to an embodiment of the present invention, this information is stored in the instance database 58, as described above. If, at block 1808, it is determined that the user has selected the menu item...

...user. An illustrative error log 1826 is shown in FIGURE 61 and includes lists of all errors encountered by the server during the execution of data interchange operations.. If, at block 1808, it is determined that the user has selected a menu item for viewing an operations queue, the routine 1800...

...the invention, the WO 01/69431 PCT/USOI/08611 the source objects to create target objects, and saving the target objects at a target location. Data interchange operations may be performed in response to a user command, in response to a user defined schedule, or as part of a workflow process. Additionally, data interchange operations may trigger other data interchange operations, workflow processes, or messages, in response to their success or failure. VVhile the preferred embodiment of the invention has been illustrated and described...

...invention. The embodiments of the invention in which an exclusive property or privilege
is claimed are defined as follows:
1 . A method for performing a data interchange operation, comprising:
receiving a request to perform said data interchange operation comprising the identity of a source object, a source location, a target location, and a transformation;
and
in response to receiving said request, executing said data interchange
operation by:
retrieving said source object at said source location,
performing said transformation on said source object to create a target object, and
saving said target object at said target location.

2 The method of Claim 1, fluther comprising:
determining whether said data interchange operation was successfully
executed; and
executing a success data interchange operation in response to determining that said data interchange operation was successfully executed.

3 The method of Claim 1, further comprising:
determining whether said data interchange operation was successfully
executed; and
executing a success workflow in response to detennining that said data
interchange operation was successfully executed.

4 The method of Claim 1, further comprising:
   determining whether said data interchange operation was successfully
   executed; and
   executing a...

15/3,K/17   (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00829975   **Image available**
APPARATUS AND METHOD FOR VOLUME PROCESSING AND RENDERING
DISPOSITIF ET PROCEDE DE TRAITEMENT ET DE RENDU DE VOLUME
Patent Applicant/Assignee:
   THE RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK, P.O. Box 9,
     Albany, NY 12209-0009, US, US (Residence), US (Nationality), (For all
     designated states except: US)
Patent Applicant/Inventor:
   KAUFMAN Arie E, 94 Cedar Drive West, Plainview, NY 11803, US, US
     (Residence), US (Nationality), (Designated only for: US)
   BITTER Ingmar, 1456 Stony Brook Road, Stony Brook, NY 11790, US, US
     (Residence), US (Nationality), (Designated only for: US)
   DACHILLE Frank, 546 Terrace Road, Bayport, NY 11705, US, US (Residence),
     US (Nationality), (Designated only for: US)
   KREEGER Kevin, 115 Randall Avenue, Port Jefferson, NY 11777, US, US
     (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
   BARON Ronald J (et al) (agent), Hoffmann & Baron, LLP, 6900 Jericho
     Turnpike, Syosset, NY 11791, US,
Patent and Priority Information (Country, Number, Date):
   Patent: WO 200163561 A1 20010830 (WO 0163561)
   Application: WO 2001US6345 20010226 (PCT/WO US0106345)
   Priority Application: US 2000185076 20000225
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
   AU CA JP US
   (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
Publication Language: English
Filing Language: English
Fulltext Word Count: 58813

Fulltext Availability:
   Detailed Description

Detailed Description
... allow high-bandwidth communication of ray information instead of the
   usual up-over-down communication that occurs within the memory hierarchy.

   The processing in the ray tracing architecture does not follow a
   strict sequence as found in prior art volume rendering accelerators.
   Instead, the work to be perfortned is grouped into 3D blocks. The 3D
   blocks are then processed (e.g. rays cast or traced,, I 0 or
   segmentation performed) according to an order where the block which will
   provide the most results while being the closest...

...now to Figure 55, a 2D top-down view of a typical 3D scene to be rendered is shown divided into cells 514 by a scheduling grid 516. All volume 518 and polygonal 520 data are distributed among the scheduling grid cells 514 which they intersect. Rays 522 are cast into the scheduling grid 516 and stored in queues 524.

Referring now to Figure 56, the processing element 501 of the ray tracing architecture includes a scheduler 526 and dispatcher 528 that communicates between a buffer (FIFO) 530. The scheduler 526 and dispatcher 528 have knowledge of the scheduling grid 516 and the associated list of ray queues 524. The scheduler 526 determines which blocks to process and in which order. The scheduler 526 selects the best block based on the current state of ray queues 524 and the current state of the memories according to a heuristic metric. The scheduler 526 stores a list of blocks to process in the FIFO buffer 530. The dispatcher 528 transfers blocks to individual processing units 500 and controls the movement of sampled and geometry data among the three levels of the memory hierarchy—Level 1 (eDRAM) 512, Level 2 (SDRAM) 506, and Level 3 (main) 508. In this way, it is assured that the correct data are available when a processing unit 500 begins to process a block.

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The cells 514 are scheduled for processing in an order the minimize the total processing timebased on the status of the rays 522 and ray queues 524. Further, the scheduler 526 considers that data distribution throughout the memory hierarchy as well as the contribution of each cell 514 toward completion of the processing.

Traditionally, scheduling can be performed in one of two ways, either
geometrically, for deterministic processing such as raycasting, or heuristically for non-deterministic algorithms such as ray tracing. Examples, of heuristic methods are greedy algorithms such as scheduling the next cell with the most work, or statistical I 0 probability methods such as ratios of ray-queue length to count of non-transparent
objects as described in Rendering Complex Scenes with Memory-Coherent R Tracin , by M. Pharr et al., Computer Graphics SIGGRAPH97, pages 101-108, Aug.
1997.

Prior attempts have been made to design an algorithm which utilizes interframe coherence to schedule more efficiently. A dependent graph for each frame showing which cells send rays to which other cells was built. For the next frame, the graph built from the previous frame to guide the new cell processing order was utilized. Unfortunately, for ray tracing the dependency graph becomes "locally complete". This means that any cell depends on every single one of its neighbors, and is thus connected to every neighbor. Since rays cannot jump over cells, each cell is connected only to its neighbors, but is connected to all of its neighbors. This is what "locally complete" means. The graph is not "complete" because that means every node is connected to every other node. In addition, the "locally complete" graph is not much use for aiding in the scheduling of cells since a selection cannot be made as to which cell should be scheduled before it's

neighbors. The dependency graph does not contain the information needed to schedule cells because there is no order to the dependency relations.

Referring now to Figures 56A through 56F, a method known as ray forest for scheduling cells based on inter-frame ordered dependency relations is now described.

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A ray forest 540 is a group of trees, one tree 542 for each ray 522, which represents ordered information about how rays propagate through the scheduling grid 516. Since rays 522 in a ray tracing application span multiple child rays, the data structure associated with each ray 522 is a tree 542 where each node 544 represents a ray 522 traversing from one cell 514 to another, and leaves represent cells where rays terminate and place their contribution into the resulting image. There are three different actions that could occur when a ray 522 is processed in a cell 514.

1 . The ray passes through the cell touching no objects. In this case, the node has one input and one output (i.e. the node is locally a "twig").

2. The ray hits an object an spawns a child shadow ray 550, a plurality of reflected rays 548 (if the surface is reflective) and a plurality of child transmitted rays (if the surface is not totally opaque). In this case the node has one input and multiple outputs, one for each child ray.

3 . The ray terminates either by hitting an object or exiting the world at this cell. In this case, the node is a leaf of the tree.

In the ray forest method, each scheduling grid cell appears in multiple nodes, and a single cell can occur in the same tree multiple times. For example, consider the case where a ray bounces back and forth between two reflective objects in alternating cells. Referring now to Figures 56B and 56C, RAY "A" enters cell number 8 and traverses through cell number 5 to interact with an object 546. A first reflected ray 548 bounces back through cell number 5 into cell number 8 and out through cell number 7. A second reflected ray 550 bounces back through cell number 5 and out through cell number 7 towards a light 552 illuminating the scene. The tree 542 labeled RAY "A" in Figure C has a data structure representing the path of RAY "A." RAY "B" also illustrates these concepts in Figures 56B and 56C.

Referring now to Figures 56D through 56F, to utilize the ray forest method to
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schedule calls, the top k nodes of all ray trees are considered. Heuristic algorithms such as the greedy or statistical methods mentioned above determine the next cell to process. When a cell is processed, all the rays waiting to enter that cell are processed.

The trees which represent these rays are "popped". This means that the top node is taken off these trees. If the node is a "twig", the tree remains the same, if the node has multiple children, each child "branch" becomes a new tree in the forest representing all the new rays which were spawned.

Since k nodes at the top of each tree are looked at, "future" information is I 0 acquired about what cells will soon be processed and an attempt to not remove them from the lower levels of the memory hierarchy right before they are about to be processed is made. The number of levels k that are considered, is a tradeoff on accuracy of the scheduling and runtime of the scheduling portion of the algorithm.

1 5 The forest of trees will only represent what actually happens to rays in the new frame if no rendering parameters (viewpoint, transfer fimetion, lights, etc,) change since ray forest information from the previous frame is used. Although this is not the normal case, the change from one frame to the next is generally considered to be minimal. Inter frame coherence takes advantage of these minimal changes to estimate the best scheduling for the next frame. However, since there is some change, the ray forest must be able to deal with the rays not acting exactly like they did the previous frame.

Texture mapping is widely used technique to stimulate high-quality image effects, such as surface details...

...hierarchical memory architecture. In this combined architecture, the polygon engine's only responsibility is to rasterize triangles, while Cube 5 will perfonn the texture lookups. Rays are initialized with the data from the
119
rasterized polygonal image. This would include the (u,v) texture coordinates and a texture index. In this way deferred texturing can be accomplished so that only visible...
...such quality is desired. Deferred texturing lowers the cost of utilizing such higher quality methods. Additionally, the system coherently accesses texture images through the memory hierarchy. Further, programmable deferred shading (such as Renderman shaders or procedural textures) is possible by storing the required parameters during rasterization.

The system also supports ray tracing mixture of polygons and multiple
volumes using the scheduling grid cells to reorder the processing to memory coherent chunks. Applications which do not require the image quality produced by ray tracing polygons, can utilize polygon rasterization hardware. External polygon rasterization is used to allow much larger polygon datasets to be rendered at much faster frame rates.

The projected RGBaZ image is used to initialize the ray endpoints. Subsequently, the volume is rendered terminating the rays at the proper depth. This leverages existing geometry hardware to correctly render, in real-time, opaque polygons in harmony with volume rendering.

An architecture known...it receives both the volume data and polygons. The rays which are processed for that cell are, first, intersected with the polygons. The closest
160
intersection point is stored in the ray and the ray is cast through the volume data, stopping at the polygon intersection point. Scattering (transmission or reflection) is computed and the secondary rays are similarly processed. EUREKA rasterizes polygons in the geometry pipeline to allow large polygon datasets to be rendered at high frame rates. The projected RGBaZ image is used to initialize the ray endpoints.

Subsequently, the volume is rendered terminating the rays at the proper depth. This leverages existing geometry hardware to correctly render, in real-time, opaque polygons in hannony with volume rendering. Translucent polygons must be rendered in sorted order to yield correct results. The recursive ray tracing algorithm automatically handles any number of multiple translucent polygons.

Texture mapping is a widely-used technique to simulate high-quality image effects, such as...

...desired. Deferred texturing lowers the cost of utilizing such higher quality methods.
Image-based techniques use images as rendering primitives. Rendering then becomes a resampling process, which can be efficiently implemented using a generalpurpose CPU possibly with the assistance of texture-mapping hardware. Preferably
EUREKA supports image-based rendering techniques with...

...pre-integrated into a 2D table, also called the footprint. Points can be located at arbitrary positions and can be represented as a multi-resolution hierarchy. EUREKA's ray-directed rendering approach will render points using the ray-based point-array traversal scheme of Mueller and Yagel . In that approach, rays traverse the points in volume space, computing the footprint table indices by simple differencing equations. The needed coefficients can be stored with the ray.

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Tomographic reconstruction is a technique used to recover 3D volumes from a set of 2D projection images. These images can originate from an X-ray scanner as well as a photographic camera. Tomographic reconstruction consists of a series of volumetric backprojections, possibly intermixed with a series of froward projections when an iterative reconstruction algorithm is chosen. Both forward and backward projection can be efficiently implemented in EUREKA. The ray-directed approach enables the modeling of ray scattering and attenuation, which is crucial for highfidelity reconstruction of volumes from functional modalities, such as SPECT and PET. Especially the flinctional modalities will benefit...

00772919   **Image available**
AUTOMATIC   WORK   PROGRESS   TRACKING   AND   OPTIMIZING   ENGINE   FOR   A
    TELECOMMUNICATIONS CUSTOMER CARE AND BILLING SYSTEM
MOTEUR DE SUIVI ET D'OPTIMISATION D'ACTIVITE AUTOMATIQUE POUR UN SYSTEME DE
    SERVICE A LA CLIENTELE ET DE FACTURATION DE TELECOMMUNICATIONS
Patent Applicant/Assignee:
  AMERICAN MANAGEMENT SYSTEMS INCORPORATED, 4050 Legato Road, Fairfax, VA
    22033, US, US (Residence), US (Nationality), (For all designated states
    except: US)
Patent Applicant/Inventor:
  WOLFINGER Charles, Markgrastrasse 60, D-40545 Dusseldorf, DE, DE
    (Residence), US (Nationality), (Designated only for: US)
  SOTOLA Rene, 2357 Spotswood Place, Boulder, CO 80304, US, US (Residence),
    GB (Nationality), (Designated only for: US)
Legal Representative:
  BECKERS J Randall, Staas & Halsey LLP, Suite 500, 700 Eleventh Street,
    N.W., Washington, DC 20001, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200106426 A1 20010125 (WO 0106426)
  Application: WO 99US16442 19990726 (PCT/WO US9916442)
  Priority Application: US 99354084 19990715
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM
  HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW
  MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW SD SL SZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 10662

Fulltext Availability:
  Detailed Description

Detailed Description
... is directed to a system for work progress
  tracking and management and, more particularly, to a system for
  assigning tasks to a workforce, optimizing the scheduling of the
  tasks,
  1 5 with automatic rescheduling of the tasks while insuring the
  completion
  of the tasks before the desired completion date and utilizing...

...wireline, wireless, residential customers, and business
  customers Further, business customer orders are often many times
  more complex than those found in the residential marketplace To
  schedule staff for these customers, telecom companies need to
  reflect
  the customer's value Often a customer's value may be assigned
  designations such as gold...

...a percentage of the workforce that are reserved just for maintenance tasks This percentage of the workforce dedicated to maintenance must be "invisible" to the scheduling process and be
1 5 able to fluctuate from one day to another
Scheduling optimization also must be based on more than one parameter One such parameter is order priority, which may reflect the value of the customer as discussed above Another is flexibility, which is needed to reflect the desired workforce utilization For example, one telecom company may desire to schedule their areas Given the number of possible permutations based on daily based on the latest data
Examples of workflow products include InConcertT' and FileNetTM InConcertrm provides interface to MSProjeCtTM , which is single-dimension planning There is no rules engine within either...

...tracking system is needed
that is sophisticated enough to handle the above described level of complexity, which also can include integration among workflow, Page 5
scheduling, and workforce management, while also applying automatic re-optimization on a regular basis This system should also operate without significant manual intervention and schedule tasks based on several constraints
SUMMARY OF THE INVENTION
It is an object of the present invention to provide a method of integrating workflow, workforce management and scheduling functional paradigms
It is a further object of the present invention to combine state of the art tools (an inference engine and a sophisticated scheduler...

...and offline optimization based on configurable criteria
It is a further object of the present invention to automatically re optimize all orders based on the data gathered during the day (deltas
of actuals and planned, new orders, and canceled orders)
It is another object of the present invention to optimizes schedules based on multiple criteria including minimization of costs,
minimization of gaps in work pool assignments, order priority (high, medium, low), and jeopardy to the schedule
It is still a further object of the present invention to combine the foregoing objectives with a sophisticated scheduler that considers the start and finish dates and considers the target percentage workforce utilization when scheduling
It is a further object of the present invention to automatically reschedule all jobs offline when a change in utilization parameter occurs Thus, when the...

...current jobs to
reflect the change in the workforce
Page 6
It is an additional object of the present invention to be able to flexibly schedule taking into consideration the geographical area With such a geographic capability it is possible to include members of a different work pool to help with...

...needed Once such work pool members are designated
as available outside the home base, the system automatically takes
their availability into account during the offline scheduling run
and re
schedules all jobs accordingly
It is also an object of the present invention to allow for flexibility
1 0 of the system in the area of...to customer premises
When rescheduled, it would be desirable to insulate the customer
from changes, i e "lock" the task where such dependency exists, and
schedule around it Another example of locking is scheduling
against
a given date, e g customer says he'll place an order if it can be
fulfilled by a particular date It would be...

...the
completion date and ensure rescheduling does not impact it
It is still a further object of the present invention to provide for
flexible workforce scheduling based on multiple parameters These
can reflect such items as "customer value", utilization percentage (the
same workforce typically works on installation and trouble tickets, so...

...zones (frozen zone, stability zone, optimization
zone), and duration of time slots
It is a further object of the present invention to perform on-line
scheduling of new and modified activities during the day as they
occur
It is also a further object of the present invention to maintain
stability of the schedule with respect to re-scheduling This
stability of
the schedule relates to the frozen zone, stability zone,
optimization
zone The zones and their functions are described in detail later,
together with pictorial representation The other aspect of stability of
the schedule is the flexibility to "lock" tasks (either
dependencies or
delivery dates) so as to make internal schedule changes transparent
5 to the customer
It is still a further object of the present invention to produce
highly optimized schedules These schedules take into
consideration
order priority, make duration of composed activities small, and avoid
gaps in work pool utilization activities typically comprise several
tasks The system schedules as many of the tasks in parallel as
possible, thus producing the shortest possible critical path for the
overall composed activity Further, these schedules plan for as many
activities as possible
It is also an object of the present invention to take into
consideration that activities have to be...

...work
pool members
It is still a further object of the present invention that the system
not violate certain constraints and should not yield empty
schedules,
Page 8

i e the user get back a valid schedule but certain constraints can be
softened
It is an object of the present invention to compute a target
completion date for orders that do not...

...fulfilled
The above objects can be attained by a system that manages BRIEF
DESCRIPTION OF THE DRAWINGS
Figure 1 is a diagram of an activity tree generated by a
customer order
Figure 2 is a diagram showing the five different time zones
related to optimization and scheduling of the present invention
Figure 3 is a diagram showing the physical architecture of the
present invention with a client personal computer ("PC"), an
application server (where scheduling, workflow, calendar functions
take place), and a database server
Figure 4 is a diagram showing the overall software architecture
Page 9
for the present invention for both the distributed online system and
distributed offline system
Figure 5 is a data flow diagram of the online system showing
the progression of activities during the day Such activities include
new activities being entered, older activities being modified...

...Figure 8 is a flowchart further detailing the offline system
shown in figure 5
Figure 9 is a diagram showing the overall software architecture
and data flow for distributed offline system in the present
invention
DESCRIPTION OF THE PREFERRED EMBODIMENTS
Before discussing the features of the present invention a
summary of...all truck drivers in
Boulder may be considered a resource pool since they are in the
same geographic area and possess the same skills The scheduling
Page 1 1
system assigns tasks to resource pools Assignment of worker
names to resources is done shortly before the task is due to start...

...people rotate (e g John
Smith, who is Technician I leaves, and Jane Doe who is also
Technician I joins, this is transparent to the scheduling subsystem
A calendar defines the times when a workforce resource fills
capacity in a time slot There are periodic times of unavailability like
weekends, shifts...

...Page 12
A calendar rule defines the dates and time a workforce
resource for a resource pool is either available or unavailable for
assignment This information includes the workforce member's sick
days, shift schedule, and vacation
Scheduling is the process of organizing a set of activities
into
an "optimal" order, based on the parameters supplied The
scheduling of each task takes into account dependencies, priority,
duration, staff availability per job category (work pool), and material

resources During the day, on-line scheduling is performed on an
1 0 order-by-order basis During the night, offline optimization runs are
started for all orders in the system
An...

...time slot If a task is longer than the time slot,
the task is assigned to several time slots For example, a task has a
process time of 3 hours, but time slots have duration of 2 hours In
this case the task starts at the beginning of the first time...

...are performed by the computer system
1 5 without human intervention Activities are the basic components in
the present inventions
Constraints are directly related to scheduling of tasks
Examples of constraints include time constraints indicating starting
and finishing times, precedence constraints indicating that a task is to
start after the end...
...The template specifies in which order
tasks need to be done and the task duration It is the "best case"
situation, i e such a schedule would be met only if all resources
were
available as per such template The template is then taken as input to
the planning and optimization process, where the tasks are checked
against resources available in the work pool, or external resources
Page 14
(e g materials availability) The "real" schedule is then derived
based
on the order priority, work pool resources and the schedule
tightness
The workflow templates support conditional branching, as well
as branches within branches This is done through the creation of
branches within the workflow and...

...of which are illustrated in the accompanying drawings,
wherein like reference numerals refer to like elements throughout
Figure 1 is an example of an activity tree A customer order
entered through a PC client system 100 shown in figure 3 is mapped
1 5 to an internal order 10 (10") Internal work
orders 40 ("WO) Finally, WO's 40 may be divided into one or more
tasks 50
Figure 2 illustrates a time line having five different time
zones
related to optimization processing The times zones start with a
horizon past to zero point time zone 62 Tasks, which...

...represents a
time period in the future An individual resource assignment made for
tasks that start in this zone 64 cannot be changed Thus, the
schedule engine 170 shown in figure 4 is not allowed to touch tasks
in
this zone 64 Again, the system only takes into account the
corresponding...

...frozen time zone is one day
The purpose for the frozen time zone 64 is to prevent the
system from making last minute changes to schedules to which it WO

a gap of one hour, but all outstanding tasks are two hours If there is a
gap of two hours and the online system 101 needs to schedule a two
hour task, it would fill this gap Gaps are defined as "installation
gaps", obviously a company would have workers do other non
installation work rather than keeping them idle The scheduling
engine is allowed to fill in gaps in stability zone 66, but not to take
out
or move tasks already scheduled This is done to...

...by an authorized user and can vary according to
the authorized user's preference
Still referring to figure 2, in the optimization zone 68 the
schedule engine 170 shown in figure 4 is allowed to re-assign
activities Hence, this zone 68 is not stable with respect to
1 5 rescheduling Work orders may be rescheduled in order to produce
the optimum schedule possible The typical length of time for the
optimization zone 68 is two months However, the length of time for
this period may be altered...

...changed at
any time
Referring to figure 3, this figure illustrates the overall physical
architecture of the present invention in the form of a three tier
computer system Figure 3 depicts a PC (personal computer) client
system 1 00 connected to an application server 1 1 0, and a database
Page...

...The PC client system 1 00 acts as primary interface to
order entry staff and permits the entry of new orders, modification of
ordersanddeletionoforders Theapplicationserverll0iswhere
scheduling, workflow, and calendar functions take place The
database server 120 is where the data is stored
The architecture shown in Figure 3 is called a 3-tier
architecture The main advantage is that if the application server 1 1 0
is overloaded, the customer can simply add additional application
servers 1 1...

...00 MS Project is used to graphically represent
the relationship among different tasks However, it should be noted
that all optimization is done by the scheduling engine 170, not by
MS
Page 18
Pro.ect Orbix from IONA is the Object Request Broker of choice
used for communications between the PC...

...views represent the Graphical User Interface a Customer
Service Representative (or any other user) uses to interact with the
system All application logic, i e scheduling, workforce management,
WO 01/06426 PCT/US99/16442
Page 19
server 1 1 0 uses sophisticated 31d party technology – ILOG" Rules,
ILOGII Solver and ILOG TM Scheduler (not shown) which form the
basis of the schedule engine 170 shown in figure 4 ILOG TM Rules is
an inference engine, which facilitates the construction of intelligent

agents for decision making in real...logic is
best described as a set of interacting rules that govern actions in
response to known conditions Rules are used to govern task and
information routing [LOG TM Rules supports both C++ and Java The
implementation described in this invention is in C++
ILOG TM Solver is a constraint-programming...

...use two ideas a) Explicitly represent the set of values that
a decision variable can take, b) Represent the search for a solution as
a tree traversal When ILOGI solver follows a branch of a node
, it
assigns the value of the branch to that variable Solving the problem
can thus be visualized as finding a solution from the "root" node
down
to the "leaves"
ILOG TM Scheduler utilizes the ILOG TM Solver engine by
Page 20
integrating algorithms specific to scheduling (e g links between
activities and resources)
The application server 1 1 0, shown in figure 3, includes an
inference engine 103 (also known as...

...basic building block for the workflow part of the system The ILOG TI
Rules available from ILOGI product is preferably used as the
inferenceengine103 Theapplicationserverl1Oalsoincludesa
schedule engine 170 shown in figure 4, capable of optimizing on
several parameters through the recognition of Boolean operands (e g
'AND','Offetc) The ILOG TI Solver and Scheduler available is
preferably used as the schedule engine 170 shown in figure 4
The following table serves to define all items that appear in
figure 3
Layer Description
ACL AMS Class Library...

...well as "black box"
components like Architel
ASAP and ISIS Papyrus that
provide standalone application
services On a PC client, this
covers products from Sting
Ray (e g , Objective Toolkit
grid controls)
In a typical environment there are a large number of PC client
systems100 Alsothesystemworksinadistributedfashionsothat
both the application server 1...115 (Customer Care/Order
processing interface server), shown in Figure 5, through which an
order is sent from Customer Care to Order Processing
Third, the scheduling engine170 takes the template as input to
online optimization, checks on the availability of resources in the
resource pool and comes up with the "realistic...

...rather than the "best case" workflow, which was
the starting point
An example of an automatic addition is a new order The order
0 construction process invokes the workflow engine 185 shown in
figure

4 and then invokes the schedule engine 170 (ILOG TI
Solver/Scheduler) shown in Figure 4 The scheduling engine 170
schedules a new order
An example of a manual modification is the completion of
tasks, where the actual completion time and date are entered into the...

...for task X
is not fulfilled until 6/5 The workflow engine 185 detects a new
request and puts the newly modified order through the scheduling
engine in the offline run, which results in task X starting on 6/5
A clean up occurs when the workflow engine 185 detects a
new/modified task and runs it through the schedule engine 170 The
schedule engine 170 corrects the inconsistencies and contradictions
This checking and clean up function of the workflow engine 185 has
Page 26
two positive side effects...

...an activity
will have at most one branch as its immediate parent, although the
activity may "belong" to more than one branch, via the branch
hierarchy Descendants of a deactivated branch are deactivated
A branch's activation is controlled by a set of user-defined
predicates, or execution conditions A condition...

...If a
branch is evaluated to true then the tasks and work orders contained
within the branch are automatically added to the workflow
Page 27
Scheduling Input
Each day new customer orders are entered into the system
using the PC client system 1 00 The orders comprise dependent
tasks 50 shown...

...This is to enable the distributed offline system 102
to re-optimize based on the latest situation captured through actuals
during the day
The online scheduling accomplished by the distributed online
scheduling system 101 is illustrated in Figures 5 and 6
Referring to Figure 5, a customer service representative enters
a new order using the PC Client...

...without any workforce intervention, in which case
the workflow engine guides the order through the other computer
systems (not shown) to the completion When human scheduling is
required the following steps occur
Page 28
First, the order is put into a scheduling queue 130 to be picked
up by the Resource and Locking Sever 180, which starts scheduling
engines 170 and maintains a pending queue 140 and a running
queue 150 Jobs whose resource pools are being used to schedule
another order are kept in the pending queue 140 Jobs, which have
free resource pools move to the running queue 150 to be scheduled
by the scheduling engine 170 The scheduling engine accesses
data
- e g workforce availability - in the database 120
Referring to Figure 6, in operation 1010, the online transaction

are started As provided in operation 1020...

...the constraints is transmitted to the application
server110 Theapplicationserver110Outputsthejobtobescheduled
onto pending queue 140 The Resource Locking Server 180 shown in
figure 4 ensures that multiple scheduling engines do not access the
same resource pool at the same time In other words, it prevents
double booking of the resource pool resources The workload server
160 shown in Figure 5 balances scheduling load among the
Scheduling engines 170
The scheduling engine 170 of figure 5 retrieves data from
other
Page 29
sub-components as shown in operation 1040 of figure 6 A Workflow
Area/Planning Area sub-component includes information about
activities, information about pool requests, and information
about
dependencies Examples of activities include activity name and
activity duration Examples of work pool activities include availability
of a work pool member using a...

...Task B can only start after Task A is complete
The Resource Pool Area sub-component (not shown)
1 0 contained in database 120 includes information about resource
pools,
and information about time slots
Automatic tasks are done without workforce intervention They
get executed in real time or near real time These automatic tasks are
not...

...fromthePCclientsystem100 "Actuals"isinformationon
activities in progress during that day as shown in operation 1 1 00 and
1110ofFigure7 The"actuals"reflectthelateststatusofactivities,
e g completed on schedule, completed earlier than forecast, and
completed later than forecast, or a new forecast completion date for
tasks which started and will finish earlier or later...

...are kept in the "pending" state with a new forecast
completion date as provided in operation 1 1 30 of Figure 7 Once the
new schedule is created, the distributed online system 1 01 stops
execution of this transaction in operation 1 1 50 The workflow engine
185 ensures that no...

...the solution search
If this time limit is reached, the search will stop and some constraints
must be relaxed This time limit is configurable The schedule engine
170, shown in figure 4, executes the following operations in operation
1040 of Figure 6
1 Check temporal constraints of a first type (dependencies...

...the
afternoon or the following day
3 Pre-select time slots requires the reading of the existing
assignments for the pre-selected time slots The scheduling
engine 170 now examines what capacity is available in which
time slot The examination is against resources in work pools

4 Solve problem using constraint propagation on the set of
selected time slots using scheduling engine 170 shown in
Figures 4 and 5
Distributed Offline System
The distributed offline system 102, shown in figure 9, takes all
Page 32
orders...

...8 In operation
1200 of Figure 8, the distributed offline system 102 is triggered
automatically by the Calendar Rule Engine 182, using a configurable
parameter
Scheduling Input
The distributed offline system 102, shown in figure 9, and the
distributed online system 101 , shown in figure 9, complement each
other It uses...

...up Activities
The distributed offline system 102 shown in figure 9 runs
periodically, nightly It then takes as input from database 120 all of
the data gathered during the day by the online system though the PC
client system 1 00 including new orders, canceled orders, modified WO
01/06426 PCTIUS99...
...noted that the start and duration of
the optimization zone shown in Figure 2 is modifiable
In operation 1230 the offline system 1 01 reads data from the
1 0 database 120 to get the latest picture (new orders, canceled orders
etc) Operation 1230 is an initialization operation executed prior to...

...majority of the orders under
consideration were already planned during the running of the
distributed online system 1 01 , shown in Figure 5, using the
scheduling
engine 170 shown in figures 4 and 5 Thus, the required order
parameter is calculated for the distributed offline system 102, shown
in Figure 9...

...are relative
numeric weight values which determine how important the
three values used to calculate OrderParam are, normalized so
that TightnessWeight + DueDateWeight + PriorityWeight = 1
(reference data)
AVGManualTasksmeans Take the average of the formula, for all
Manual Tasks in the 10 10
MaxOrderParam = 10,000 The maximum value possible for
OrderParam This...

...of the Frozen Zone is 0, and the end of the
Optimization Zone is represented in units of whatever the
minimal time grain is (reference data)
Horizon TimeGrain-scale value for "End of Optimization Zone"
ManualTask StartMin attribute The earliest starting time for the task,
in TimeGrain-scale
Manual Task StartMax...HIGH
TightnessTerm = TightnessNormFactor * (Horizon − (StartMax
StartMin)) / ProcTime) NOTE, however, the ProcTime term

should eventually be changed to be (Horizon - ProcTime)
DueDateTerm = DueDateNormFactor * (Horizon - StartMax
Optimization process
The new schedule is optimized with respect to certain criteria
using optirnizer application 195 of figure 4 and as shown in operation
1240 of Figure 8
Referring to operation 1240 of Figure 8 and Figure 5, all
internal orders are retrieved from database server 120 by
scheduling
engine 170 and added to the pending queue 140 of the resource and
locking server 180 The jobs in the pending queue 140 are sorted...
...e Planned Vs Actual), as described in the preferred
embodiment, operation 1140 can attempt to find a free time slot such
that the current day schedule would be optimized taking the delta
between Planned and Actual completion into account If the workflow
engine succeeds in operation 1140, the problem is solved...

 15/3,K/19   (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00750462   **Image available**
ANIMATION OF THREE-DIMENSIONAL CHARACTERS ALONG A PATH
ANIMATION DE CARACTERES TRIDIMENSIONNELS LE LONG D'UNE TRAJECTOIRE
Patent Applicant/Assignee:
  AVID TECHNOLOGY INC, Avid Technology Park, One Park West, Tewksbury, MA
    01876, US, US (Residence), US (Nationality)
Inventor(s):
  MILLER Paul, 319 Chandler Street, Tewksbury, MA 01876, US
  PAUL Brian E, 200 Massmill Drive #214, Lowell, MA 01852, US
Legal Representative:
  GORDON Peter J, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue,
    Boston, MA 02210, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200063848 A1 20001026 (WO 0063848)
  Application: WO 2000US9944 20000413 (PCT/WO US0009944)
  Priority Application: US 99293497 19990415
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AU CA JP
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Filing Language: English
Fulltext Word Count: 11424

Fulltext Availability:
  Detailed Description

Detailed Description
... the purpose of animation. In both of these displays, the text is
  displayed in a three-dimensional form. This interface may be combined
  with a timeline editing interface for editing an associated video
  program, or other user interface, to permit layering of titling effects
  and adjustment of animation properties and timing...3;

Fig. 5 is a flow chart describing how the data structure shown in Fig. 3 may be processed to determine properties associated with each node in the structure;

Fig. 6 is a flow chart describing how a character may be rendered;

Fig. 7 is a flow chart describing how a...WindowsNT, Windows 95 or 98, IRIX, UNIX, Linux, DOS, VMS, MacOS and OS8 are examples, which controls the execution of other computer programs and provides scheduling, debugging, input/output control, accounting, compilation, storage assignment, data management and memory management, and communication control and related services. The processor and operating system defines ...0), by Segal and Akeley, all of which are hereby incorporated by reference in their entirety.

Referring now to Fig. 3, in one embodiment a data structure which represents a titling effect to be applied to video is a scene graph. The implementation may be object oriented.

The scene graph object may be implemented as a tree or other structure such as a list, array, etc. An example of such a tree is shown at 50 in Fig. 3. The tree has a root node 52. The root node has a collection of children nodes which may be, for example, a text box 54 or shape 56 or page deck 55. The root node also has associated with it a collection of property stacks which will be described in more detail below.

A shape object is any arbitrary closed two-dimensional shape, such as a rectangle, circle or triangle. Accordingly, a shape node 56 is represented by data defining the shape, such as a Bdzier.

A text box object 54 is defined as a collection of characters, which...

15/3,K/21   (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00579160   **Image available**
EXPERT SYSTEM FOR CONVERTING DATA RECORDS FROM A TABLE-BASED FORMAT TO A
    DATA TREE FORMAT
SYSTEME EXPERT PERMETTANT DE CONVERTIR DES FICHES EN FORMAT DE TYPE TABLEAU
    EN FICHES EN FORMAT DE TYPE ARBORESCENCE DE DONNEES
Patent Applicant/Assignee:
  POINT LOMA INDUSTRIES INC,
Inventor(s):
  BUCHANAN Leonard F,
  ANDRADE Ernesto P,
  CHRISTENSEN James L,
  HUDDLESTON Donna R,
  SWEENEY Dennis P,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200042533 A1 20000720 (WO 0042533)
  Application: WO 2000US935 20000113 (PCT/WO US0000935)
  Priority Application: US 99115948 19990114; US 99115914 19990114; US
    2000481718 20000112; US 2000481953 20000112; US 2000482972 20000112
Designated States:
(Protection type is "patent" unless otherwise stated - for applications

prior to 2004)
AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB
GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA
MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA
UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU
TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG
CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 11040

Fulltext Availability:
  Detailed Description
  Claims

Claim
  1 . A method for converting data records from a table-based database
  format to nodes of a data tree format, including the steps of. (a)
  creating a data tree framework by defining a root node containing a
  unique identi
  fier and at least one attached container node;
  (b) for each attached container node, retrieving all data records
  from the table-based database having an identifier field value matching
  the unique identifier; (c) matching a parent sequence number stored a
  current retrieved record to a parent
  sequence number of a current container node;
  (d) attaching a descriptor node containing data from the current
  retrieved record as a
  child node of the matching container;
  (e) repeating steps (c) and (d) for a next retrieved record; and
  (f) repeating steps (b) though (e) for a next container node.

  2 The method of claim 1, further including maintaining the number of
  child nodes between 3 and 5.

  3 A method for converting data records from nodes of a
  data tree format to records of a
  table-based database, including the steps of:
  (a) reading a first node of the data tree; and
  (b) determining if the node has a sequence identifier, and:
  (1) if so, updating a corresponding record in the table-based database,
  reading a
  next node of the data tree, and repeating step (b) for
  such next node;
  (2) if not, checking whether a delete flag is set for such node,
  and:
  (A) if so, ignoring the node, reading a next node of the
  data tree, and repeating
  step (b) for such next node;
  (B) if not, creating a new record in the table-based database, storing
  any values of the node in such record, reading a next node of
  the data tree, and repeating step (b) for such next
  node.

  4 A system for converting data records from a table-based database
  format to nodes of a

data tree forinat in a computer system, including:
(a) means for creating a data tree framework by defining a
root node containing a
unique identifier and at least one attached container node;
(b) means for retrieving all data records from the table-based
database having an identifier field value matching the unique identifier
for each attached container
node;
(c) means for matching a parent sequence number stored a current
retrieved record to a
parent sequence number of a current container node;
(d) means for attaching a descriptor node containing data
from the current retrieved
record as a child node of the matching container;
(e) means for repeating steps (c) and (d) for a next retrieved record;
and (f) means for repeating steps (b) though (e) for a next container
node.

5 The system of claim 4, further including means for maintaining the
number of child nodes between 3 and 5.

6 A system for converting data records from nodes of a
data tree format to records of a
table-based database in a computer system, including:
(a) means for reading a first node of the data tree;
and
(b) means for determining if the node has a sequence identifier,
and:
(1) if so, updating a corresponding record in the table-based database,
reading a
next node of the data tree, and repeating step (b) for
such next node;
(2) if not, checking whether a delete flag is set for such node,
and:
(A) if so, ignoring the node, reading a next node of the
data tree, and repeating
step (b) for such next node;
(B) if not, creating a new record in the table-based database, storing
any values of the node in such record, reading a next node of
the data tree, and repeating step (b) for such next
node.

7 A computer program, stored on a computer-readable medium, for
converting data records from a table-based database format to
nodes of a data tree format, including
instructions for causing a computer to:
(a) create a data tree framework by defining a root
node containing a unique identifier
and at least one attached container node;
(b) for each attached container node, retrieve all data
records from the table-based database having an identifier field value
matching the unique identifier; (c) match a parent sequence number stored
a current retrieved record to a parent
sequence number of a current container node;
1 0 (d) attach a descriptor node containing data from the
current retrieved record as a child

node of the matching container;
(e) repeat steps (c) and (d) for a next retriev ed record; and
(f) repeat steps (b) though (e) for a next container node.

8 The computer program of claim 7, farther including instructions for
causing the computer to maintain the number of child nodes between
3 and 5.
instructions for causing a computer to:
(a) read a first node of the data tree; and
(b) determine if the node has a sequence identifier, and:
(1) if so, update a corresponding record in the table-based database,
read a next
node of the data tree, and repeat step (b) for such
next node;
(2) if not, check whether a delete flag is set for such node, and:
(A) if so, ignore the node, read a next node of the
data tree, and repeat step (b)
for such next node;
(B) if not, create a new record in the table-based database, store any
values of the node in such record, read a next node of the
data tree, and repeat step (b)
for such next node
Identify
100
Desired Actu6
Assessment Patient Intervention ician
Direction1 @@1 18
Diagnosis
1-104 108 11-112 116
Assessment Patient Problem Outc"ome Intervention
----------------------------------- Knowledge Bases

FiGs 1
1200
Network 1--210
tz 202 1-202 1-204 --@ ----------- - TT
Server I Server #M Client Station # 1 Client Statio,
Decision Decision Data Entry Data Ent,
206-@,
Support Rules Support Rules and Display and Disp)
220 Processor I Processor FInterface Controli 1interface Cc
208-@-,
Patient Data Patient Data Processor r Process(
Memory memori
FIGm 2
Set ...Breathing Pattern and
timal Gas Exchange
Cardiogenic Shock Adequate Cardiac Output
Relatiot
400
FIG, 3E Tablec.
rma n
Broke
Patient D,
e Struc
404

nt Data
Problem
Interventions
Outcomes
ProtocG
402 of
FiGa 4
Root Node 500
1
Conta@@@502
I
Descriptorl 504
Desc 504
Descriptorn [@504
FIG, 5A
PatientlD 506
Patient Rapid Scan sment Care Plan
-508
FiGs 5B
Mvi...

...Blood Blood
Pressure 1 Pressure
A
Sitting tanding Lying Down Sitting Standing
I I I I -1
I Number ber FA/um Number
FIG, 6
Data Entry 700
704 ew
@@elect Existing
Individual
706
Enter Chief Complaint
or 708
Follow Up Information
Open Individual Char-t 71 0
900 100(
750 Flagno
Assessment stic
F care Plan
Rapid Scan Help
78oo 752
-7%t
FIGa 7A
Select Patient Chart
- List Patients - Andrews, julianna Selected Patient Information
* by Name Botster. Nick Add New Patient]
Brown, James Patient I.D. 112398
Chambers, John
* by I.D. donna, Donna Date of Birth Edit Patient...

...w-F
802 804
-806 808
Enter Vital Signs Observations Precipatation F

Abnormal Signs Location h
Edit Last Mentation Relief
Cancel Other Character
Notes Cancel Time Line
Date and Time Close Cancel
Record L
F"Determine Pro 812
1
1petermine Inter 814
816
Determine Outcom@es
FIG, 8A
Vital Signs
Position
Sitting...Selected Outcome
I IVII @Mf IV
FAdd @Problem
Notes j F!7ionale7 FRe@place 7Name
@;Iose
FIGs 9H
1000 gnos s
Labs ECG Monitor] X-ray
1002-1 1006-1 1010-/
ECG Echo F ETT
1004-1 1008-1 1012,1
FIG, 10A
SUBSTITUTE SHEET (RULE 26)
Dx Tests for Haley...

...5 191971 08=53 New D
Normal
Test Name Value Units Min Max
IVI I I I I
Lab Test Lab Result Ot Min Max Data
Save
I IVI
Close
FIG, 10B
Dx Tests for Haley, Charles N
ILabs I ECG JECG Mo@nitor Dx @Tests
Sinus Rhythrn/Rate Ventricular Rhythrn...IV
Aortic Aneurysm
Election Fraction Dx Test DAtes
LV Akinesis
LV Hypertrophy
LV Hypokenesis
RV Akinesis
RV Hypertrophy
RV Hypokenesis
Diskenesis
Paricardial Effusion
Chest X-ray Interpretation
Negative
Enlarged Heart
Infiltrates
Pulmonary Edem-a/Congestioi

Pericardial Effusion
Widened Mediastnum
790;Iose
FM 1 OE
SUBSTITUTE SHEET (RULE 26)
11-1102 ..... 1...
...S Recordp
e Tablespace.m
FiGs 1 1
25%
20% 11
15%10%5%
0%
2 3 4 5 6 7 8
Number of Child Nodes
FIG, 13
SUBSTITUTE SHEET (RULE 26)
1220
Define Root Read a node
Node with 1200
unique 1222 //@1 224
PatientID
Update existing
eq. 9 tablespace
Retrieve all ? record
records 202
matching
PatientID 226
y te
Match record set
PSNs to 1204
container PSNs
Create a new
Attach tablespace 228
descriptor node record
to container 206
with matching 1230
PSN
208
NO one
FIG6 12B
Continue with .,.-1210
next container
FIGN 12A
SUBSTITUTE SHEET (RULE 26)
INTERNATIONAL...

...4; 705/2,3; 345/356v357
Documentation searched other than minimum documentation to the extent
that such documents are included in the fields searched Electronic
data base consulted during the international search (name of
data base and, where practicable, search terms used)
EAST, NPL, IEEE, ACM
C. DOCUMENTS CONSIDERED TO BE RELEVANT
Category* Citation of document, with indication, where appropriate, of
the relevant passages Relevant to claim No.

A TU et al. Episodic Skeletal-Plan refinement Baesd on Temporal 1-9
Data, Communications o fthe ACM, December 1989, Vol 32, No.

12 pages 1439-1455, the entire document
A DELANEY ET AL. Design of a Temporal Database...

...is not considered the principle or theory underlying the invention
to be of particular relevance
'E' earlier document published on or after the international filing
data X. document of particular relevance-, the claimed invention
cannot be
considered novel or cannot be considered to involve an inventive step
'L' document which may...

 15/3,K/22   (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00579114   **Image available**
PROTOCOL BUILDING TOOL FOR MEDICAL DECISION SUPPORT EXPERT SYSTEM
OUTIL DE CONSTRUCTION DE PROTOCOLE POUR SYSTEME EXPERT MEDICAL D'AIDE A LA
    DECISION
Patent Applicant/Assignee:
  POINT LOMA INDUSTRIES INC, Suite 495, 9820 Willow Creek Road, San Diego,
    CA 92121, US, US (Residence), US (Nationality)
Inventor(s):
  BUCHANAN Leonard F, 811 Jennings Place, San Diego, CA 92106, US,
  ANDRADE Ernesto P, 1872 Bexley Landing, San Jose, CA 95132, US,
  CHRISTENSEN James L, 1269 Via Conejo, Escondido, CA 92029, US,
  HUDDLESTON Donna R, 5644 Dehesa Road, El Cajon, CA 92019, US,
  SWEENEY Dennis P, 7155 Celome Court, San Diego, CA 92129, US,
Legal Representative:
  HAGLER James T (agent), Fish & Richardson P.C., 4350 La Jolla Village
    Drive, Suite 500, San Diego, CA 92122, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200042487 A2-A3 20000720 (WO 0042487)
  Application: WO 2000US907 20000113 (PCT/WO US0000907)
  Priority Application: US 99115914 19990114; US 99115948 19990114; US
    2000481718 20000112; US 2000481953 20000112; US 2000482972 20000112
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
  GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
  MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU
  ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 14629

Fulltext Availability:

Detailed Description
Claims

Claim
...   IQqm 'E I WIETO JO umiBaidnindwoo oql −t7l
  L0600/OOSf1/JL3d LStZtl/00 OM
  en fy
  Assessment Patient Desired Intervention Actual
  Problems Outcomes Outcome
  Patient
  Data
  0
  c
  Direction/
  j0q Diaposis
  @/j I x 116
  Assessment Patient Problem Outcom; lnterventiofi Evaluation
  Knowledge Bases
  Figure 1. Care Giving Process
  Network
  er Server #M Client Station Station
  :Decision: SuDecision [−Data, Entry
  .up 'o and Display
  p:
  0:
  r:
  t u
  ZAV @Support Rules] pport Rules]
  interface Interface
  Control
  Patient
  =at& ir
  jProcessor]
  Mem2ry.
  hemati lock Diagram
  Figure 2. Data Processing System SC C
  Set of Rules
  rotocol @− Y
  individual Hierarchical Problem, Intervention,
  History and Symptom & outcome Trees Problem,
  Current State Stru ure n Intervention
  Trans ator & outcome
  an En&c Sets
  49
  Electronic
  Record
  Figure 3AFunctional Block Diagram
  Relational
  Tables 7
  rmat Pat ent
  Broker Data
  Patient Data
  Tree Structure
  a en ata.
  Probl

Interventions
Outcomes
ro
oo@
Protocols
Vd 2L Rule Server Knowledge
Base
Figure 4. Core Computational Modules of the Invention
e...

...and Optimal Gas
Exchange *
espiratory Rate <= 30
hortness of breath jEffective Breathing Pattern and Optimal Gas
Exchange
Cardiogenic Shock Adequate Cardiac Output
71=/
Roo t Node
Container
41,
Descript:Or Di--@
Descriptor 2
Descriptor n
Fig,, 5
,4 Ilierarchical Structure of Patient Data
pitientm J
Rapid Scan @men
Fip.Fb, Repriesentative Psticnt.Trei Root Node and Major Containers
Now A Ust Is a gm of vNew
bod
Pro""
OcIwn
Fig. 6 Vitals Tree Structure
ata entry
7a r I -7 a Z
a new individual select existing
-7 individual
enter chief complaint
or
follow up information
- I
IfeO open individual chart C9,
patient assessment Tiagnostic test-SI
F - - 7 /2,
,
care plan help
L. 7
Figure..7AI?ata Entry Flowchart
ust...

...enter v ta s gns bservations prec patation factors
abnormal signs location recent problems
edit last mentation relief cancel
cancel other character close
otes cancel time line
date and time Flose cancel

record close
determine proble@
ms@
determine
determine
Figure 8ARapid Scan Flowchart
M. Fro,
ftht Pulse
siltiv SBP / DBP Rate- RR...Adequate Cardiac Output
Heart Rai@)a 50
A
T'Irio outmw
Slatut
.IN
@;g jr
Zr 4 ....;"m
A::
/28
diagnostic tests
Labs ECG monit ray
% APO 6@ 40@ 14011
F Echo TT
Figure I'AP iagnostic Test Flowchart
lira =Zrln: @'ITnrq-,v
im
T.
7.55:
Lab did@r IL...90
entry point eo@
Moir
problem interventi n outcome
parent module e
enter new rule select rule from
existing list
I CtIl /V
enter rule
information lltllt#@
no inue
build indicat

0 r
Figure I 14Rule Selection Flowchart
/28
Mairs WbAnfellitill, (P L" 0 Q
I ntervention
Outcome
Mol,
/28
3...

15/3,K/23   (Item 14 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00578240

EIC3600 SEARCH RESULTS   106   1/13/2010

EXPERT SYSTEM FOR REAL-TIME DECISION SUPPORT
SYSTEME EXPERT D'AIDE A LA DECISION EN TEMPS REEL
Patent Applicant/Assignee:
  POINT LOMA INDUSTRIES INC,
Inventor(s):
  BUCHANAN Leonard F,
  ANDRADE Ernesto P,
  CHRISTENSEN James L,
  HUDDLESTON Donna R,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200041613 A2 20000720 (WO 0041613)
  Application: WO 2000US908 20000113 (PCT/WO US0000908)
  Priority Application: US 99115948 19990114; US 99115914 19990114
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
  GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
  MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU
  ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
  CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
  GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 12651

Fulltext Availability:
  Detailed Description
  Claims

Claim
... categorizations as selections from pre-defined lists.

  21 The computer program of claim 14, further including instructions for
  causing the
  computer to:
  (a) receive input data about a patient's health status;
  (b) analyze the input data in a computer against an outcome
  evaluation healthcare knowledge base and associate an outcome evaluation
  based on the analysis of the
  input data;
  (c) compare the outcome evaluation to the desired outcome to determine a
  patient's intervention progress.

  22 The computer program of claim 14, further including instructions for
  causing the computer to collect and process patient data from
  a plurality of sites and consolidate from such patient data
  information indicative of any one of. (a) a trend analysis of
  quality of care metrics, for quality of care visibility; (b) evidence of
  a disease or...

...for cost visibility.

  23 The computer program of claim 14, including further instructions for
  causing the computer to provide a training mode wherein the input
  data comprises constructed patient scenarios rather than data

about an actual patient being treated, and the instruc
tions:
(a) require a student operator to determine a correct answer at each step
of an analysis process before the student operator is allowed to
proceed to a next step in the
analysis process;
(b) provide rationale and help screens for interactive learning by the
student operator; (c) record student operator attempts and success rates
at providing such correct...

...provide a test phase during which a testing student operator's knowledge
is tested.
ent
ssessmen Patient ntervent on Actual
Pat ent Problems Utcornes Outcom
Data -Z@
0 0 1 1
ys c an
Direction/
104 Diagnosis
116
Assessment Patient Problem Outcomi InterventioA Evaluation
- - ---------------------- - - ---------
---------------- - -Knowledge Bases
Figure 1. Care Giving Process
Z"q 0
Network
Server Sen Client Stat on Client Station #N
Decision Dec s on Data Entry I Data Entry
Rules Support Rules and Display
Support
-rface I-Interface
Inte
ontrol
|@@fl Control
EpEtient Data @ @E
emory
@Ory
Figure 2. Data Processing System Schematic Block Diagram
Set of Rules
I '@@ 76)
Protocol '@Y/ C)
Individual Hierarchical Problem, Intervention,
History and Symptom & Outcome Trees Problem,
Current State...

...feren Intervention
a Eng s a & Outcome
Sets 'T/Y
2,
Electronic
Records
Figure Al'unctional Block Diagram
Relational
Tables el@ 6e
rmation atient

Broker Data
atient Data
Tree Structure
at ent ata
Prob]
Interventions
Outcomes
Protocols
owledge

2 Rule Base
Figure 4. Core Computational Modules of the Invention
ac2
2
e e t...

...Pattern and OP timal Gas
Exchange
spiratory Rate <= 30
Shortness of breath jEffective Breathing Pattern and Optimal Gas
Exchange
ardiogenic Shock dequate Cardiac Output
Root Node
Container
Descriptor 1
es p
Desc;ptor 7n
Figi, 5-.4 Hierarchical Structure of Paticnt Data
Pa Rapid Scan en Care Plan LDx Test/Monitors
Fip Repre'sentative Patient Tree' Root Node and Major
Containers
Note: A List is a set of Vitals
swo
I I
Sitting to to LYN
00"
r
Fig. 6 Vitals Tree Structure
/18
ata entry
7a r −7
a new individu
;F] select existing
individual
enter emo c ata
enter cc complaint 7C57
or
information
7142
IVO open individual ch r
assessment diagnostic tests
7/2.
help
rapid scan
L 7
Figure..7AI?ata Entry Flowchart

```
M ",7177, I 7s...factors
I
enter v tal signs observat on prec patat on factors
abnormal si location recent problems
editlast mentation relief cancel
other character close
ancel time line
d time close cancel
close
Edetermine probleE@@ IF 2@
determine inte
determine o@@
Figure 8
,4Rapid Scan Flowchart
Plrq 7lm
Puile
S kiv 58P DBP SI; OLtcww ...J.
pv,
-@U
Z'
tin. P.
.WI
diagnostic tes
I
Labs ECG monitor X-ray
/o@
ECG Echo E77
Figure I 0
,,@Piagnostic Test Flowchart
LAbs jCG ECG Mor@@Jw: DmwTo6--"f"
4 Lab T 0 w
55-00
7...
```

 15/3,K/24   (Item 15 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00536250   **Image available**
A COMPUTER SYSTEM AND PROCESS FOR EXPLAINING BEHAVIOR OF A MODEL THAT MAPS
    INPUT DATA TO OUTPUT DATA
SYSTEME ET PROCEDE INFORMATIQUES SERVANT A EXPLIQUER LE COMPORTEMENT D'UN
    MODELE FAISANT CORRESPONDRE DES DONNEES D'ENTREE A DES DONNEES DE
    SORTIE
Patent Applicant/Assignee:
  TORRENT SYSTEMS INC,
Inventor(s):
  PASSERA Anthony,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9967602 A1 19991229
  Application: WO 99US14076 19990622   (PCT/WO US9914076)
  Priority Application: US 98102349 19980622
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)

```
AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU
ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW
ML MR NE SN TD TG
```
Publication Language: English
Fulltext Word Count: 4331

Fulltext Availability:
  Detailed Description

Detailed Description
... has been reached. By recursively splitting each subspace, each split
  defined by the data splitting module 16 may be represented by a decision
  tree. Each node of the decision tree stores an indication of the
  dimension which is most salient for the input data and the threshold used
  by the node for splitting the input data into subspaces. The
  decision tree thus hierarchically defines, for each subspace of the input
  space, the dimension and threshold used...subspaces also may be performed
  in parallel and in a pipelined manner, as shown in Fig. 3. In particular,
  the sensitivity analysis module 12 and data splitting module 16 of
  Fig. 1 may be considered a data splitter 30 as shown in Fig. 3. The
  model 1 1 is not shown in this figure, because it may be considered to be
  used in a preprocessing step to generate the partial derivatives from
  which sensitivity measures are computed. A data splitter 30
  receives input data 31 and generates output subspaces 32 and 33.
  Additional data splitters 34 and 36 may be provided to operate in
  parallel on the output subspaces 32 and 33 to provide additional
  subspaces.

  A more detailed...

...selected based on the sensitivity measures as indicated in step 50. A
  threshold for the selected dimension is determined in step 52 from the
  input data set. For each input datum, as indicated in step 54, the
  value of the selected dimension is compared to the determined threshold
  in step 56...

...be presented to a user for example by a computer display or printout in
  a number of formats. By representing the description using a decision
  tree, each node of the tree may be described using a
  rule in a first order predicate calculus. The user may traverse the
  tree and interactively expand or contract each node to view
  the description for each node of the tree.

  A general purpose computer system may be used to implementing the system
  shown above using a computer program. Such a computer system typically
  includes a main unit connected to both an output device which displays
  information to a user and an input device which receives input from
  a user. The main unit generally includes a processor connected to a
  memory system...

...interconnection mechanism.

  It should be understood that one or more output devices may be connected

to the computer system. Example output devices include a cathode
ray tube (CRT) display, liquid crystal displays (LCD), printers,
communication devices such as a modem, and audio output. It should also
be understood that one or...

...input devices may be connected to the computer system. Example input
devices include a keyboard, keypad, track ball, mouse, pen and tablet,
communication device, and data input devices such as sensors. It
should be understood the invention is not limited to the particular input
or output devices used in combination with...

...operating system, of which WindowsNT, Linux, UNIX, System 7, DOS, VMS
and OS8 are examples, which controls the execution of other computer
programs and provides scheduling, debugging, input/output control,
accounting, compilation, storage management, data management and memory
management, and communication control and related services. The processor
and operating system define...

 15/3,K/25   (Item 16 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00520729   **Image available**
METHOD AND APPARATUS FOR THREE-DIMENSIONAL CHARACTER ANIMATION
PROCEDE ET APPAREIL D'ANIMATION DE CARACTERES EN TROIS DIMENSIONS
Patent Applicant/Assignee:
  AVID TECHNOLOGY INC,
Inventor(s):
  MILLER Paul,
  PAUL Brian,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9952081 A1 19991014
  Application: WO 99US7136 19990331 (PCT/WO US9907136)
  Priority Application: US 9854763 19980403
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AU CA JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 7300

Fulltext Availability:
  Detailed Description

Detailed Description
... called an operating system, of which WindowsNT, IRIX, UNIX, DOS, VMS
  and OS8 are examples, which controls the execution of other computer
  programs and provides scheduling, debugging, input/output control,
  accounting, compilation, storage assignment, data management and memory
  management, and communication control and related services. The processor
  and operating system defines...0), by Segal and Akeley, all of which are
  hereby incorporated by reference in their entirety.

  Referring now to Fig. 3, in one embodiment a data structure which
  represents a titling effect to be applied to video is a scene graph. The

implementation may be object oriented.

The scene graph object may be implemented as a tree or other
structure such as a list, array, etc. An example of such a tree is
shown at 50 in Fig. 3. The tree has a root node 52. The root
node has a collection of children nodes which may be, for
example, a text box 54 or shape 56 or page deck 55. The root node
also has associated with it a collection of property stacks which will be
described in more detail below.
A shape object is any arbitrary closed two-dimensional shape, such as a
rectangle, circle or triangle. Accordingly, a shape node 56 is
represented by data defining the shape, such as a Bdzier.

A text box object 54 is defined as a collection of characters, which may
be representing using any...

 15/3,K/26   (Item 17 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00520728   **Image available**
A TIME INHERITANCE SCENE GRAPH FOR REPRESENTATION OF MEDIA CONTENT
GRAPHE TEMPOREL DE SCENE D'HERITAGE POUR LA REPRESENTATION DU CONTENU DES
    SUPPORTS
Patent Applicant/Assignee:
  SYNAPIX INC,
Inventor(s):
  FRENCH Michael T,
  ROBOTHAM John S,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9952080 A1 19991014
  Application: WO 99US6639 19990326   (PCT/WO US9906639)
  Priority Application: US 9854603 19980403
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AU CA CN JP SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 14065

Fulltext Availability:
  Detailed Description

Detailed Description
... leaves
    output traversals propagate recalculated data,
  up toward the root.

  c. Renderers and Domains
  A renderer class defines an abstract Application
  Programming Interface (API) for nodes to call during
  traversal, and node actions are dispatched to renderer
  implementations. Caches are part of the renderer
  interface. By abstracting actions and caches, every node
  implementation is made renderer independe nt. Renderers

must maintain a cache factory to construct the correct cache type.

Traversals occur within domains. When a render...

...the required data. The type of the new renderer must match the new domain, but the specific instanced renderer may be supplied by the boundary node. These are the two choices for domain processing.

schedule domains to be traversed, from leaf domain to root domain, ensuring all data is made available to cached nodes; or have one universal traversal which chains out of scene-level caches through callbacks, and into new domain traversals.

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-27
There...

...graph. For example, loading an image into a material seems like a trivial domain, which is better serviced by a callback from the cached material node. A more complex load/process/material pipeline can be promoted to full domain status.

The domains are
- 2D imaging and compositing
- 3D segmentation and compositing
- 3D scenes
- 2D shader trees and texturing
Each traversal has one renderer registered in its traversal context for each domain. This allows a large set of possible renderer functions to be partitioned, with a mix and match selection. There is a close correspondence between data types within the graph 40, the allowable traversals, the set of renderers for each traversal, and the operator nodes 50 which can be processed. These are the principal abstract classes together with some possible output rendering systems.

SUBSTMTE SHEET (RULE 26)
-28
D a 4C a Domain Rende.@ers
Temporal Timeline SW (java UI)
SW, VSA hw, OpenGL, SGI
2D imaging IL/IFL, Java2D
Image
3D imaging SW, OpenGL
optimizer/Cosmol
OpenGL, Java3D
Renderable 3D scene mental ray, RenderMan,
Softimage, Alias
3D sound SW, Java3D
Audible
IAudio SGI AL, MIDI, JavaSound

The highest level type in the system is Temporal,
which relates to the handling of scene time within the
hierarchy. Every operator and every data structure in the
graph can respond to a time-based traversal of the graph.

The time domain includes the whole graph. The time
aspects of the graph 40 are rendered to the timeline 36.

Image renderables include 2D images and 2D geometric
markup. 2D image renderers can process 3D images, but they
will only get the correct result when the scene is
strictly layered, which may require extra 2D work. 3D
scenes can...

 15/3,K/27   (Item 18 from file: 349)

00401863   **Image available**
APPARATUS AND METHOD FOR MANAGING AND DISTRIBUTING DESIGN AND MANUFACTURING
    INFORMATION THROUGHOUT A SHEET METAL PRODUCTION FACILITY
APPAREIL ET METHODE CORRESPONDANTE PERMETTANT DE GERER ET DE REPARTIR UNE
    INFORMATION RELATIVE A LA CONCEPTION ET A LA FABRICATION DANS UNE
    INSTALLATION DE PRODUCTION DE TOLES
Patent Applicant/Assignee:
  AMADA METRECS CO LTD,
  AMADASOFT AMERICA INC,
Inventor(s):
  HAZAMA Kensuke,
  KASK Kalev,
  SAKAI Satoshi,
  SCHWALB Moshe Edward,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9742607 A2 19971113
  Application: WO 97US7473 19970506 (PCT/WO US9707473)
  Priority Application: US 9616958 19960506; US 96700671 19960731
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 149194

Fulltext Availability:
  Detailed Description

Detailed Description
... through a cabinet or file of old paper tapes or magnetic disks.

  Despite such advancements,there is still a need to improve the
  organization and flow 0
  ofdesignandmanufacturinginfonnationthroughoutthefactoryenviromnent.
  Forexample, conventional manufacturing systems do not logically associate
  both critical design and manufacturing information associated with each
  customer's order so that it...of entities define inner loops and

boundaries of the part.

In addition. the face detecting system may further comprise a system for
generating a loop tree based on the outward loop defined by the
initial linked list of entities and the inner loops 0 defined by the
additional linked list of entities. Further, the face detecting system
may detect the faces of the part based on the loop tree and the
sequence of boundaries defined by the initial linked list entities and
the additional linked list of entities.

The bendline identification system of the...

15/3,K/28   (Item 19 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2010 WIPO/Thomson. All rts. reserv.

00155298
HIGH PERFORMANCE GRAPHICS WORKSTATION
POSTE DE TRAVAIL GRAPHIQUE A HAUTE PERFORMANCE
Patent Applicant/Assignee:
  DIGITAL EQUIPMENT CORPORATION,
Inventor(s):
  DOYLE Peter Lawrence,
  ELLENBERGER John Philipp,
  JONES Ellis Olivier,
  CARVER David C,
  DIPIRRO Steven D,
  GEROVAC Branko J,
  ARMSTRONG William Paul,
  GIBSON Ellen Sarah,
  SHAPIRO Raymond Elliott,
  RUSHFORTH Kevin C,
  ROACH William C,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 8901664 A1 19890223
  Application: WO 88US2727 19880812 (PCT/WO US8802727)
  Priority Application: US 8781 19870813
Designated States:
(Protection type is "patent" unless otherwise stated – for applications
prior to 2004)
  AT BE CH DE FR GB IT JP LU NL SE
Publication Language: English
Fulltext Word Count: 25542

Fulltext Availability:
  Detailed Description

Detailed Description
... represent the display device and the processing
  capability of the graphics system required to process
  the output data or d splay on a catho e ray tube. For
  instance, with respect to color aloner eight bits of
  information per pixel may be required to store
  information on the red, green and...stored in a
  structure memory component in the graphics subsystem* ok

The three-dimensional graphics data structures are each
implemented as a hierarchical graphics data node
structure in the structure memory. For a thorough
discussion of the principal concepts of interactive
.computer graphics as generally employed by the system of
the invention, reference should be made to Fundamentals
of Interactive Computer Gra-phics by J.D. Foley and A.

Van Dam (Addison-Wesley 1982).

Each node is defined as a fundamental memory unit to
contain graphics data or commands relating to the
primitives, transformationst attributes and so.on of the
graphics structure being built pursuant to a specific
application program residing in...

...asynchronously operational structure walker in the
graphics subsystem traverses a special control structure
stored in the structure memory on a continuing basis to
read and process requests for traversal of the nodes of
the graphics structures and to send the data and command
information contained in the nodes down a graphics
pipeline for processing, manipulation and display by the
graphics processing components of the graphics
subsystem.
Pursuant to an important feature of the...

...function is partitioned among the host
and graphics subsystem components to accept requests for
graphics structure traversals made by competing
application programs, and to subsequently schedule and
In accordance with known concepts of interactive
computer graphicsf the invention makes use of a
windowing system to provide a conversion from the world
coordinate system of the user to appropriate geometric
coordinates suitable for the physical display device of
the workstation, i.e. the cathode ray tube. A window is
a rectangular array of pixels which may be partially or
wholly visible on the display device depending upon the
size of the window relative to the physical dimensions
of the display screen. Windows are also in a hierarchy
with a "parent" window and sub-windows or "children".

Windows may be resized and sub-windows used for clipping
by the parent when a sub...

...X Window System developed
under the auspices of the Massachusetts Institute of
Technology as a royalty free industry standard.

5 Pursuant to the invention, the data generated by the
windowing system to create and define the window
coordinates and attributes is uniquely identified by the
traversal control system for correlation to the
hierarchical graphics data node structure of the object
to be displayed within the rectangular array of the

window.

Accordingly, the asynchronous traversal by the structure
walker is able to...

...Window
System which was developed primarily for use in two
dimensional, bit mapped graphics systems. The window
identification data for correlation to the three
dimensional node memory structures systematically merges
a three@dimensional functionality into the advantageous
x window System.
Pursuant to another significant feature of the
invention, a separate two...
?

IV. Text Search Results from Dialog

A. Abstract NPL and Foreign Patent Databases

```
? show files;ds
File 350:Derwent WPIX 1963-2009/UD=201001
        (c) 2010 Thomson Reuters
File 344:Chinese Patents Abs Jan 1985-2006/Jan
        (c) 2006 European Patent Office
File 347:JAPIO Dec 1976-2009/Sep(Updated 091230)
        (c) 2010 JPO & JAPIO
File 371:French Patents 1961-2002/BOPI 200209
        (c) 2002 INPI.  All rts. reserv.
File   2:INSPEC 1898-2009/Dec W2
        (c) 2009 The IET
File  35:Dissertation Abs Online 1861-2009/Nov
        (c) 2009 ProQuest Info&Learning
File  65:Inside Conferences 1993-2010/Jan 08
        (c) 2010 BLDSC all rts. reserv.
File  99:Wilson Appl. Sci & Tech Abs 1983-2009/Nov
        (c) 2009 The HW Wilson Co.
File 256:TecTrends 1982-2010/Jan W2
        (c) 2010 Info.Sources Inc. All rights res.
File 474:New York Times Abs 1969-2010/Jan 08
        (c) 2010 The New York Times
File 475:Wall Street Journal Abs 1973-2010/Jan 08
        (c) 2010 The New York Times
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
        (c) 2002 Gale/Cengage
File  23:CSA Technology Research Database 1963-2009/Nov
        (c) 2009 CSA.
File  56:Computer and Information Systems Abstracts 1966-2009/Nov
        (c) 2009 CSA.

Set    Items   Description
S1     25798   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
          PROCESS OR THREAD)(2S)(PYRAMID? OR POLYHEDRON OR POLYGONAL)
S2     60073   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
          PROCESS OR THREAD)(2S)(HIERARCHY OR TIER)
S3     85526   S1 OR S2
S4    333105   SCHEDULE OR SCHEDULING OR SCHEDULES OR TIMELINE? ? OR TIME-
          ()LINE? ?
S5   1758010   FLOW()LINE? ? OR FLOWLINE? ? OR RAY? ? OR LINE()SEGMENT? ?
S6    598315   NODE OR NODES OR NODAL OR POINT? ?(3N)(CONNECT? OR INTERSE-
          CTION)
S7       319   LINKED()DATA()STRUCTURE? ?
S8     90661   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
          PROCESS OR THREAD)(2S)(TREE)
S9      1981   (INFORMATION OR DATA OR CONTEXT OR CONTEXUAL OR CONTENT OR
          PROCESS OR THREAD)(2S)(QUADTREE)
S10    12372   MILESTONE? ? OR MILE()STONE? ?
S11   173783   S3 OR S8 OR S9
S12   344762   S4 OR S10
```

```
S13        5   S5 AND (S6 OR S7) AND S11 AND S12
S14        4   RD  (unique items)
? t14/3,k/all
```

 14/3,K/1   (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2010 Thomson Reuters. All rts. reserv.

0018248824 – Drawing available
WPI ACC NO: 2008-L69157/200868
Related WPI Acc No: 2002-148087; 2007-220911; 2007-389780; 2007-797965;
  2008-C17928; 2008-C19216; 2008-G32779; 2008-J27660; 2009-H14317;
  2009-J99468; 2009-N47650; 2009-P83499
Image rendering method for digital computing system, involves utilizing
termination criterion and memory scheduling heuristic to enable
construction of efficient ray tracing acceleration data
tree structure in given fixed memory block
Patent Assignee: KELLER A (KELL-I); WAECHTER C (WAEC-I)
Inventor: KELLER A; WAECHTER C
Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	
US 20080231633	A1	20080925	US 2000212286	P	20000619	200868	B
			US 2001265934	P	20010201		
			US 2001884861	A	20010619		
			US 2002299574	A	20021119		
			US 2005693231	P	20050623		
			US 2006793063	P	20060419		
			US 2006474517	A	20060623		
			US 2007886197	P	20070123		
			US 2007910940	P	20070410		
			US 2007737424	A	20070419		
			US 200818733	A	20080123		

Priority Applications (no., kind, date): US 2000212286 P   20000619; US
  2001265934 P   20010201; US 2001884861 A   20010619; US 2002299574 A
  20021119; US 2005693231 P   20050623; US 2006793063 P   20060419; US
  2006474517 A   20060623; US 2007886197 P   20070123; US 2007910940 P
  20070410; US 2007737424 A   20070419; US 200818733   A   20080123

Patent Details

Number	Kind	Lan	Pg	Dwg	Filing Notes
US 20080231633	A1	EN	115	51	Related to Provisional US 2000212286
					Related to Provisional US 2001265934
					C-I-P of application US 2001884861
					C-I-P of application US 2002299574
					Related to Provisional US 2005693231
					Related to Provisional US 2006793063
					C-I-P of application US 2006474517
					Related to Provisional US 2007886197
					Related to Provisional US 2007910940
					C-I-P of application US 2007737424
					C-I-P of patent US 7184042
					C-I-P of patent US 7227547

Image rendering method for digital computing system, involves utilizing

termination criterion and memory scheduling heuristic to enable
construction of efficient ray tracing acceleration data
tree structure in given fixed memory block

  Alerting Abstract ...NOVELTY - The method involves utilizing a
termination criterion and memory scheduling heuristic to enable
construction of an efficient ray tracing acceleration data
tree structure in a given fixed memory block. A contiguous portion of
a memory is transmitted along with a value representative of the size of
the contiguous portion of the memory. A leaf node is constructed, if
two reference lists plus the size of a tree node do not fit
into the memory block. Memory consumption of new sub-trees is predicted....
DESCRIPTION OF DRAWINGS - The drawing shows a schematic representation of
an image from animations and interactive applications generated using
ray tracing techniques...

Title Terms.../Index Terms/Additional Words: SCHEDULE; ...

...RAY; ...

...DATA; TREE;

Original Publication Data by Authority

Argentina

Assignee name & address:
Original Abstracts:
...computer program code (software) products for terminating spatial
partition hierarchies and other hierarchies by a priori bounding, thereby
to provide, among other aspects, more efficient ray tracing in
computer graphics systems.
Claims:
...perceptible display of a scene in accordance with pixel values generated
by the computer graphics system, (2) the computer graphics system is
operable to construct ray tracing data tree structures in
memory, and (3) the constructing of tree structures includes any of
classification and sorting, the improvement comprising: utilizing a
termination criterion and memory scheduling heuristic to enable
construction of an efficient ray tracing acceleration data
tree structure in a given, a priori fixed memory block, the
termination criterion and memory scheduling heuristic comprising:
transmitting, for use in constructing the acceleration data
tree structure, a contiguous portion of memory along with a value
representative of the size of the contiguous portion of memory, and instead
of terminating the hierarchy by controlling a maximum depth of the
tree, constructing a leaf node, if two reference lists
resulting from a classification step plus the size of a tree
node do not fit into the given memory block; and predicting the
memory consumption of the two new sub-trees in the sorting and accordingly
distributing the available memory to the left and right children when
continuing recursively, the predicting comprising computing a prediction
pepsilon[0, 1], which schedules a fraction of memory scheduled for
the left child, the remainder of the memory being scheduled for the right
child, such that depth is implicitly controlled by the scheduled memory,
and the scheduling allows local adaptation of depth.

Abstract: We present a framework that uses data dependency
   information to automate load balanced volume distribution and
   ray-task scheduling for parallel visualization of massive
   volumes. This dependency graph approach improves load balancing for both
   ray casting and ray tracing. The main bottlenecks in
   distributed volume rendering involve moving data across the
   network and loading memory into rendering hardware. Our load balancing
   solution combines static network distribution with dynamic ray
   -task scheduling. At the core of the dependency graph approach are
   the flex-block tree, introduced in this paper, and the cell-
   tree. The flex-block tree is similar to a kd-tree
   except that leaf nodes are cells containing a combination of empty
   space and tightly cropped subvolumes, or flex-blocks. A main
   contribution of this paper is the moving walls algorithm, which uses
   dynamic programming to create a flex-block partition. We show results
   for optimizing distributed ray cast rendering using a time cost
   function. We compare data distribution using the moving walls
   algorithm, with distribution using a recursive solution, and with a grid
   combined with a local kd-tree partition on each render-node.

07354092
Title: Optimal processor allocation for sort-last compositing under
   BSP-tree ordering
Authors(s): Ramakrishnan, C.R.; Silva, C.T.
Author Affiliation: Dept. of Comput. Sci., State Univ. of New York, Stony
   Brook, NY, USA
Journal: Proceedings of the SPIE - The International Society for Optical
Engineering, vol.3643, pp.182-92
Publisher: SPIE-Int. Soc. Opt. Eng
Country of Publication: USA
Publication Date: 1999
Conference Title: Visual Data Exploration and Analysis VI
Conference Date: 27-28 Jan. 1999
Conference Location: San Jose, CA, USA
Conference Sponsor: SPIE
ISSN: 0277-786X
SICI: 0277-786X(1999)3643L.182:OPAS;1-D
CODEN: PSISDG
U.S. Copyright Clearance Center Code: 0277-786X/99/$10.00
Language: English
Subfile(s): C (Computing & Control Engineering)
INSPEC Update Issue: 1999-037
Copyright: 1999, IEE

Abstract: ...to perform user-controlled image composition. Our
   computational model is based on organizing rendering as well as
   compositing processors on a BSP-tree, whose internal nodes we call
   the compositing tree. Many known rendering algorithms, such as
   volumetric ray casting and polygon rendering can be easily
   parallelized based on the structure of the BSP-tree. In such a
   framework, it is paramount to minimize...

Descriptors: parallel algorithms; processor scheduling; rendering
   (computer graphics); resource allocation; tree data
   structures
Identifiers: ...last compositing; BSP-tree ordering; parallel rendering
   model; specialized pools; scan-line rendering algorithm parallelisation;
   compositing back-end; user-controlled image composition; computational
   mode; internal nodes; volumetric ray casting; polygon
   rendering; rendering algorithms; static processor resource allocation;
   optimal algorithm; communication

0012106541   IP ACCESSION NO: 20091002893; 200905-34-0042056
Out-of-Core and Dynamic Programming for Data Distribution on a Volume
Visualization Cluster

Frank, S; Kaufman, A

Department of Computer Science, Stony Brook University, Stony Brook, NY,
USA

ABSTRACT:
      Ray directed volume-rendering algorithms are well suited for parallel
implementation in a distributed cluster environment. For
distributed ray casting, the scene must be partitioned between
nodes for good load balancing, and a strict view-dependent priority
order is required for image composition. In this paper, we define the load
balanced network distribution (LBND) problem and map it to the NP-complete
precedence constrained job-shop scheduling problem. We introduce a
kd-tree solution and a dynamic programming solution. To process
a massive data set, either a parallel or an out-of-core approach is
required. Parallel preprocessing is performed by render nodes on
data, which are allocated using a static data structure.
Volumetric data sets often contain a large portion of voxels that
will never be rendered, or empty space. Parallel preprocessing fails to
take advantage of this. Our slab-projection slice, introduced in this
paper, tracks empty space across consecutive slices of data to reduce
the amount of data distributed and rendered. It is used to facilitate
out-of-core bricking and kd-tree partitioning. Load balancing using
each of our approaches is compared with traditional methods using several
segmented regions of the Visible Korean data set. Submitted January
2008Revised August 2008Accepted August 2008.

V. Dialog DialIndex Search

```
? show files;ds
File   1:ERIC 1965-2010/Dec
       (c) format only 2010 Dialog
File   9:Business & Industry(R) Jul/1994-2010/Jan 07
       (c) 2010 Gale/Cengage
File  13:BAMP 2010/Jan 07
       (c) 2010 Gale/Cengage
File  15:ABI/Inform(R) 1971-2010/Jan 07
       (c) 2010 ProQuest Info&Learning
File  16:Gale Group PROMT(R) 1990-2010/Jan 08
       (c) 2010 Gale/Cengage
File  20:Dialog Global Reporter 1997-2010/Jan 06
       (c) 2010 Dialog
File  35:Dissertation Abs Online 1861-2009/Nov
       (c) 2009 ProQuest Info&Learning
File  47:Gale Group Magazine DB(TM) 1959-2010/Dec 21
       (c) 2010 Gale/Cengage
File  75:TGG Management Contents(R) 86-2010/Dec W4
       (c) 2010 Gale/Cengage
File  80:TGG Aerospace/Def.Mkts(R) 1982-2010/Dec 07
       (c) 2010 Gale/Cengage
File  88:Gale Group Business A.R.T.S. 1976-2010/Jan 08
       (c) 2010 Gale/Cengage
File 148:Gale Group Trade & Industry DB 1976-2010/Jan 08
       (c) 2010 Gale/Cengage
File 149:TGG Health&Wellness DB(SM) 1976-2009/Nov W3
       (c) 2009 Gale/Cengage
File 211:Gale Group Newsearch(TM) 2010/Jan 08
       (c) 2010 Gale/Cengage
File 258:AP News Jul 2000-2010/Jan 08
       (c) 2010 Associated Press
File 275:Gale Group Computer DB(TM) 1983-2010/Dec 03
       (c) 2010 Gale/Cengage
File 340:CLAIMS(R)/US Patent 1950-09/Jan 07
       (c) 2010 IFI/CLAIMS(R)
File 345:Inpadoc/Fam.& Legal Stat 1968-2009/UD=200952
       (c) 2010 EPO
File 348:EUROPEAN PATENTS 1978-201001
       (c) 2010 European Patent Office
File 349:PCT FULLTEXT 1979-2009/UB=20091231|UT=20091224
       (c) 2010 WIPO/Thomson
File 351:Derwent WPI 1963-2009/UD=201001
       (c) 2010 Thomson Reuters
File 484:Periodical Abs Plustext 1986-2010/Jan 07
       (c) 2010 ProQuest
File 492:Arizona Repub/Phoenix Gaz 19862002/Jan 06
       (c) 2002 Phoenix Newspapers
File 587:Jane`s Defense&Aerospace 2009/Dec W3
       (c) 2009 Jane`s Information Group
File 608:MCT Information Svc. 1992-2010/Jan 08
       (c) 2010 MCT Information Svc.
```

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File 609:Bridge World Markets 2000-2001/Oct 01
        (c) 2001 Bridge
File 610:Business Wire 1999-2010/Jan 08
        (c) 2010 Business Wire.
File 613:PR Newswire 1999-2010/Jan 08
        (c) 2010 PR Newswire Association Inc
File 621:Gale Group New Prod.Annou.(R) 1985-2010/Nov 25
        (c) 2010 Gale/Cengage
File 635:Business Dateline(R) 1985-2010/Jan 08
        (c) 2010 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2010/Dec 09
        (c) 2010 Gale/Cengage
File 645:Contra Costa Papers 1995- 2009/Dec 24
        (c) 2009 Contra Costa Newspapers
File 647:UBM Computer Fulltext 1988-2010/Jan W1
        (c) 2010 UBM, LLC
File 649:Gale Group Newswire ASAP(TM) 2010/Nov 26
        (c) 2010 Gale/Cengage
File 654:US PAT.FULL. 1976-2010/JAN 05
        (c) Format only 2010 Dialog
File 660:Federal News Service 1991-2002/Jul 02
        (c) 2002 Federal News Service
File 728:Asia/Pac News 1994-2005/Dec W2
        (c) 2005 Dialog
File 761:Datamonitor Market Res. 1992-2010/Jan 05
        (c) 2010 Datamonitor
File 781:ProQuest Newsstand 1998-2010/Jan 08
        (c) 2010 ProQuest Info&Learning
File 810:Business Wire 1986-1999/Feb 28
        (c) 1999 Business Wire
File 813:PR Newswire 1987-1999/Apr 30
        (c) 1999 PR Newswire Association Inc
File 990:Newsroom Current Jul 01-2010/Jan 07
        (c) 2010 Dialog
File 991:Newsroom 2009 Jan 1 2009/Jul 31
        (c) 2010 Dialog
File 992:NewsRoom 2008
        (c) 2009 Dialog
File 993:NewsRoom 2007
        (c) 2009 Dialog
File 994:NewsRoom 2006
        (c) 2009 Dialog
File 995:NewsRoom 2005
        (c) 2009 Dialog
File 996:Newsroom 2004
        (c) 2009 Dialog
File 997:Newsroom 2000-2003
        (c) 2009 Dialog


Set    Items   Description
S1      330    (CLICK OR HIGHLIGHT?)(6N)(TASK OR ACTIVITY OR NODE)(20N)(D-
            ATAFLOW OR WORKFLOW OR (DATA OR WORK)()FLOW OR COLLABORAT? OR
            DASHBOARD OR DASH()BOARD OR PYRAMID?)(30N)(STATUS OR UPDATE OR
             MILESTONE OR CHECKPOINT OR CHECK()POINT)(6N)(INFORMATION OR -
            DATA OR DETAILS OR CONTEXT OR CONTENT)
S2       15    S1 FROM 340,345,348,349,351
```

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S3        315    S1 NOT S2
S4         97    S3 NOT PY>2003
S5         49    RD  (unique items)
? t2/3,k/all; t5/3,k/all
```

 2/3,K/1   (Item 1 from file: 340)
DIALOG(R)File 340:CLAIMS(R)/US Patent
(c) 2010 IFI/CLAIMS(R). All rts. reserv.

11843728   2008-0183811
E/Collaborative Multi-User Method and System
Inventors: Cavett Jeffrey (US); Kotras Timothy W (US)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000
Attorney, Agent or Firm: ABSOLUTE TECHNOLOGY LAW GROUP LLC, 135 W. WELLS
    ST., SUITE 518, MILWAUKEE, WI, 53203, US

                     Publication   Application
                     Number   Kind Date   Number   Date
                    -------------- -- -------- ------------- --------
                    US 20080183811 A1 20080731 US 200820511   20080125
Priority Applic: US 200820511   20080125
Provisional Applic: US 60-897445   20070125

Non-exemplary Claims:
 ...5. The method of claim 1, wherein said user interface is updated to
   display features selected from a group consisting of tracked changes,
   redlined changes, highlighted changes, modified text, a modified
   graphical representation of data, corrected text, corrected
   data, an assigned score, magnetic image data, bar code
   data, an assigned weighted value, notations that data is
   subject to verification, notations that user follow-up is required, user
   questions, user comments, status bars, notations identifying
   progress in completing a collaborative individual task and
   notations identifying user contributions to a collaborative
   task.

 2/3,K/3   (Item 1 from file: 345)
DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat
(c) 2010 EPO. All rts. reserv.

61823551   Family ID: 31823552
  No. of Patents: 2;   No. of Countries: 1
  No. of Legal Status: 1
Patent Basic (No,Kind,Date): US 20020087381 A1 20020704
  Project management for complex construction projects by monitoring
    subcontractors in real time (English)

  Author (Inventor): FREEMAN DARLENE M (US); HALVERSON MARK (US); LEWIS
    STACY (US); FIELY-FISHER BRONWYN (US)
Record Type: Legal Status; Abstract; Cited Refs

Patent Family:

```
  Patent No        Kd Date      Applic No        Kd Date     Wk Added
  US 20020087381  A1 20020704 US 2000750350    A  20001229 200228   (B)
  US 7031930      B2 20060418 US 2000750350    A  20001229 200616
Priority Data (No,Kind,Date):
  US 2000750350    A   20001229
```

Abstracts:
...in specification or anticipates any other reason that might delay
     completion of construction as scheduled, the subcontractor selects
     from a computerized menu the appropriate new status for the
     subcontractor's task and provides other information
     relevant to the changed situation. The status change is
     displayed on a display device, an electronic dashboard, so as
     to be easily noticed, the dashboard also providing one-
     click links to a display showing how widespread are the
     problems and a display for on-line review and approval of the
     status change by a manager or engineer in charge of the
     project, who notes the status change on the display and with
     whatever input may be provided by the other persons notified of the
     status change, decides the best course of action to keep the
     construction on schedule.
Cited Patents:

 2/3,K/4   (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2010 European Patent Office. All rts. reserv.

02747645
System for providing an interface for collaborative innovation
System zur   Bereitstellung einer Schnittstelle fur gemeinschaftliche
    Innovation
Systeme de fourniture d'une interface pour une innovation collaborative
PATENT ASSIGNEE:
  Accenture Global Services GmbH, (8886860), Herrenacker 15, 8200
    Schaffhausen, (CH), (Applicant designated States: all)
INVENTOR:
  Bechtel, Michael E., 732 Arlington Avenue, NapervilleIllinois 60565, (US)
  Kampas, Sean R., 5602 Cambridge Way, Hanover ParkIllinois 60133, (US)
LEGAL REPRESENTATIVE:
  Muller-Bore & Partner Patentanwalte (100651), Grafinger Strasse 2, 81671
    Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 2093679 A1 090826 (Basic)
APPLICATION (CC, No, Date):   EP 2009002450 090220;
PRIORITY (CC, No, Date): US 36012 080222; US 35988 080222; US 36001 080222
DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
  HR; HU; IE; IS; IT; LI; LT; LU; LV; MC; MK; MT; NL; NO; PL; PT; RO; SE;
  SI; SK; TR
EXTENDED DESIGNATED STATES: AL; BA; RS
INTERNATIONAL CLASSIFICATION (V8 + ATTRIBUTES):
IPC + Level Value Position Status Version Action Source Office:
  G06F-0017/30   A I F B 20060101 20090714 H EP
ABSTRACT WORD COUNT: 151
NOTE:
  Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text   Language   Update   Word Count
       CLAIMS A (English) 200935   868
       SPEC A   (English) 200935   26617
Total word count - document A   27485
Total word count - document B   0
Total word count - documents A + B   27485

...SPECIFICATION the logins, ratings and contributions of the user A 120A.
  the user subsection 820 may display the activity of the other users
  120B-N. The activity display 820 may display the logins, ratings
  and contributions of the other users 120B-N. The user A 120A may click on
  the new initial items tab 822 to view the new initial item activity
  or the user A 120A may click on the new grape ideas tab 823 to view the
  new grape idea activity.
    The user A 120A may click on the grape status header 816 to view
  data associated with the status of their ideas. The user A
  120A may click on the activity header 818 to view the
  activity on their ideas over a period of time. The user A 120A may
  click on the myProfile tab in the vine tab 805 to view the
  data associated with their user profile.
    <FIGREF IDREF=F0014>Fig. 8A</FIGREF> is a screenshot of an alternative
  user dashboard screen 800 displaying the my vine tab in the system
  of <FIGREF IDREF=F0001>Fig. 1</FIGREF>, or other systems for providing an
  interface for collaborative innovation. The system 100 may display
  the alternative user dashboard screen 800 to the user A 120A when the
  user A 120A clicks on the...

 2/3,K/6   (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01743099
System and method for managing direct mail campaigns
Verfahren und System zur Verwaltung von Direkt-Mail-Kampagnen
Procede et systeme pour la gestion de campagnes de marketing direct par
    e-mail
PATENT ASSIGNEE:
  Xerox Corporation, (219004), Patent Department, Xerox Square - 20 A, 100
    Clinton Avenue South, Rochester, New York 14644, (US), (Applicant
    designated States: all)
INVENTOR:
  Kanzinger, Charles G., 59 West Bel Meadow Lane South, Russell, OH 44022,
    (US)
  Zhang, Qing, 1109 Fireside Trail, Broadview Heights Ohio 44147, (US)
  Insolia, Chet C., 4829 Galaxy Parkway, Cleveland, OH 44128, (US)
  Skalinder, Brian T., 1730 Liberty Drive, Akron, OH 44313-6344, (US)
  Rane, Geetanjali, 10298 Thompson Rye Circle, Twinsburg Ohio 44087, (US)
  Chang, Chen-hu, 2325 White Marsh Drive, Twinsburg Ohio 44087, (US)
  Marshall, Shampra, 4426 Secton Road, Cleveland, OH 44105, (US)
LEGAL REPRESENTATIVE:
  Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721)

, Maximilianstrasse 58, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1426893 A1 040609 (Basic)
APPLICATION (CC, No, Date):   EP 2003027466 031201;
PRIORITY (CC, No, Date): US 430192 P 021202; US 446593 030528
DESIGNATED STATES: DE; FR; GB
EXTENDED DESIGNATED STATES: AL; LT; LV; MK
INTERNATIONAL PATENT CLASS (V7): G06F-017/60
ABSTRACT WORD COUNT: 133
NOTE:
  Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English) 200424   246
     SPEC A   (English) 200424   11701
Total word count - document A   11947
Total word count - document B   0
Total word count - documents A + B   11947

...SPECIFICATION close a job. The Close Job functionality is meant to
  provide a way for users to put a job on hold and preserve all its
  content. Users can filter out closed jobs in the Job List Page.
  Users can close any job appearing in the Job Setup Page. Users can do
  this at any point in any workflow (while on the Job Setup Page)
  described in this document. Users click the Close Job Menu Item. If
  the job is already closed, then the system ignores the clicked menu item.
  The system sets the Job Status to CLOSED. The system preserves the
  Task Status values of each task in the job. Note that
  closing a job is always reversible from within the system. The system
  clears the Job Setup Page and re-retrieves...

 2/3,K/7   (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2010 European Patent Office. All rts. reserv.

01607767
ULTRASONOGRAPH, WORK FLOW EDITION SYSTEM, AND ULTRASONOGRAPH CONTROL METHOD
ULTRASCHALLGERAT; ARBEITSFLUSSBEARBEITUNGSSYSTEM UND ULTRASCHALL-KONTROLLVE
    RFAHREN
ECHOGRAPHE, SYSTEME D'EDITION DE FLUX DE TRAVAIL, ET PROCEDE DE CONTROLE DE
    L'ECHOGRAPHE
PATENT ASSIGNEE:
  Kabushiki Kaisha Toshiba, (2077102), 1-1, Shibaura 1-chome, Minato-ku,
    Tokyo 105-8001, (JP), (Applicant designated States: all)
INVENTOR:
  SANO, Akihiro, 3578-936, Asaka 3-Chome, Otawara-Shi, Tochigi 324-0043,
    (JP)
  KAMIYAMA, Naohisa, 16-10, Shintomi-Cho 3-Chome, Otawara-Shi, Tochigi
    324-0055, (JP)
  OGASAWARA, Yoichi, 2-202-17-B101, Tayuzuka, Nishinasuno-Machi, Nasu-Gun,
    Tochigi 329-2735, (JP)
LEGAL REPRESENTATIVE:
  Midgley, Jonathan Lee (85971), Marks & Clerk 57-60 Lincoln's Inn Fields,
    GB-London WC2A 3LS, (GB)

PATENT (CC, No, Kind, Date): EP 1454585 A1 040908 (Basic)
                              EP 1454585 A1 040908
                              WO 2003043501 030530
APPLICATION (CC, No, Date):   EP 2001274774 011122; WO 2001JP10235 011122
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS (V7): A61B-008/00
ABSTRACT WORD COUNT: 152
NOTE:
  Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English) 200437   448
      SPEC A   (English) 200437   16440
Total word count - document A   16888
Total word count - document B   0
Total word count - documents A + B   16888

...SPECIFICATION of executing an activity 23a can be set. The execution
  attribute can also be set on the GUI screen of the workflow system 21.
  The information of the attribute to be set here is represented as
  the TAG of an XML file. The method of the representation is preset by,
  for...

...automatically executed without waiting a user action"; in case of the
  "Manual execution", "in the workflow system operation, a user action is
  waited, and the activity is executed upon the action"; in case of
  the "Skip", "the activity is not executed in the workflow
  system operation, and the workflow system executes the next
  activity"; and in case of the "Conditional execution", "the
  activity can be executed, or skipped or jumped in accordance with
  an execution status which the activity replies in the
  workflow system operation".

  (Setting of Attributes of Individual activity)
    With the visual editor 22 stated before, attributes which each
  individual activity 23a has can be set. An example of the setting
  is shown in Fig. 33.
    As shown in Fig. 33, the dialog box W15 of a GUI attribute menu which
  the activity 23a has is popup-displayed by the double click
  of the activity icon AP arranged on the workflow design
  screen W13, or by the selection of the "Property" item on the popup menu
  M7 or on the menu bar BR2. The dialog box W15 shown in Fig. 33 is a timer
  attribute setting menu which concerns the double-clicked activity
  23a to-be-handled.

  (Entry of Comment)
    With the visual editor 22 stated before, a comment can be entered on
  the workflow design screen W13...

 2/3,K/8   (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

01840668   **Image available**
SYSTEMS AND METHODS FOR DETECTING CLICK FRAUD
SYSTEMES ET PROCEDES POUR LA DETECTION DE LA FRAUDE AUX CLICS
Patent Applicant/Assignee:
  CHANGING WORLDS LIMITED, Leopardstown, Dublin 18, IE, IE (Residence), IE
    (Nationality), (Designated only for: US)
Patent Applicant/Inventor:
  BRADLEY Keith Joseph, 37 Sandyford Hall Crescent, Sandyford, Dublin 18,
    IE, IE (Residence), IE (Nationality), (Designated only for: US)
  COTTER Paul, 17 Weirview Drive, Stillorgan, South County Dublin, IE, IE
    (Residence), IE (Nationality), (Designated only for: US)
  PLOWER Damien, 7 Limelawn Wood, Clonsilla, Dublin 15, IE, IE (Residence),
    IE (Nationality), (Designated only for: US)
  SOFRANKO Juraj, Obrancov mieru 1513/9, 060 01 Kezmarok, SK, SK
    (Residence), SK (Nationality), (Designated only for: US)
Legal Representative:
  McCRANN Sarah et al (agent), Cruickshank & Co., 8a Sandyford Business
    Centre, Sandyford, Dublin 18, IE
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200977193 A2-A3 20090625 (WO 0977193)
  Application: WO 2008EP10858 20081218 (PCT/WO EP2008010858)
  Priority Application: US 20072576 20071218
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AO AT AU AZ BA BB BG BH BR BW BY BZ CA CH CN CO CR CU CZ DE
  DK DM DO DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE
  KG KM KN KP KR KZ LA LC LK LR LS LT LU LY MA MD ME MG MK MN MW MX MY MZ
  NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM ST SV SY TJ
  TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LT LU LV MC
  MT NL NO PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 16731

Fulltext Availability:
  Detailed Description

Detailed Description
... 34 and a Secondary Click Fraud Component 35. The Click Fraud Detector
  Primary Component operates, in part, by interrogating or scanning a data
  store for data of interest. This interrogation and data review can
  be achieved using any number of querying, data mining, and data
  evaluating techniques.

  [0055] In one embodiment, the primary component scans the Temporary User
  Request Storage 30 for unusual requests. Unusual requests can be
  identified by frequency of repetition of the request or the user
  belonging to a black list of known fraudsters stored in the Click
  Fraud Black List database 38. This is typically a database table where

user IDs or requesting IP addresses of known fraudsters are kept. The
Click Fraud Detector Primary Component will check current entries
in the Temporary User Request Storage 30 to determine if they match
entries in the Click Fraud Blacklist (or prohibited activity)
database 38. Update Requests from known fraudsters are eliminated.
Similarly aberrant update requests are eliminated from the
Temporary User Request Storage 30 and the originating user id or IP
address added to the Click Fraud Blacklist 38. An administration
API is provided to this Blacklist to allow operators to detect (or block)
addresses or MSISDNs and take actions.

[0056] While the Click Fraud Detector Primary Component 34 focuses
on generic Click Fraud indicators, such as rate of repeated user
clicks per minute, the Click Fraud Detector Secondary Component 35
provides a customized Click Fraud detection facility for the
Content Recommendation & Rating System 22. For example, if the
Content Recommendation & Rating System 22 supports a community or
collaborative based recommendation approach where users rate a
recommended item, then an operator defined concurringUserCount (OCU) sets
out the number of users who must agree in order for an item rating to be
accepted,

[0057] In another embodiment, the Content Recommendation & Rating
System 22 in question is a Personalized Search Engine where user ratings
are used to promote search results. This places a high burden...

 2/3,K/9   (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01734010   **Image available**
MOBILE WIDGET DASHBOARD
TABLEAU DE BORD A GADGETS MOBILES
Patent Applicant/Assignee:
  SNAC INC, 1001 Sixth Avenue, 4th Floor, New York, NY 10018, US, US
    (Residence), US (Nationality), (For all designated states except: US)
Inventor(s):
  CARON Mark, 145 West Ridgewood Avenue$Ridgewood, NJ 07450, US,
    (Designated for all)
  COSTA Tony, 53 Ridge Road$Green Brook, NJ 08812, US, (Designated for all)
Legal Representative:
  ROSSER Roy J (agent), Synnestvedt & Lechner LLP, P.O. Box 592, Princeton,
    NJ 08542, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 2008131417 A1 20081030 (WO 08131417)
  Application: WO 2008US61278 20080423   (PCT/WO US2008061278)
  Priority Application: US 2007913352 20070423
Designated States:
(All protection types applied unless otherwise stated – for applications
2004+)
  AE AG AL AM AO AT AU AZ BA BB BG BH BR BW BY BZ CA CH CN CO CR CU CZ DE
  DK DM DO DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE
  KG KM KN KP KR KZ LA LC LK LR LS LT LU LY MA MD ME MG MK MN MW MX MY MZ
  NA NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM
  TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LT LU LV MC

```
  MT NL NO PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 6375

Fulltext Availability:
  Detailed Description
```

Detailed Description

... engine 36 may also track total usage for each widget. Widget tracking may, for instance, take the form of keeping track of the kilobytes of information supplied to the widget, or the time the widget is displayed on the screen, with suitable weighting for which level of the widget is being displayed, or some combination thereof. The widget and dashboard engine 36 may also generate alerts when a widget receives an update. The widget update alert may be, but is not limited to, an audio alert, a visual alert such as a pop-up graphic appearing on the display 12, a vibration alert or some combination thereof.

[0045] The dashboard 13 and the widget icons 14, as well as the second level display of the widget 18 and the third level display of the widget 22 may all be dynamically zero-click changed, i.e., changed without user intervention. The changes may be effected by the widget and dashboard engine 36, the ad server 38 or the dashboard server 46 or by some combination thereof operating cooperatively. The changes may be responsive to observed user behavior such as, but not limited to, widget selection, lack of activity, volume or lighting adjustment, sound or voice input or some combination thereof. The changes may also, or instead, be responsive to a change in external information or context such as, but not limited to, breaking news, a change in score, a stock index reaching a predefined threshold, a commodity price reaching a predefined...

```
 2/3,K/10     (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01653250    **Image available**
INTEGRATED DRUG DEVELOPMENT SOFTWARE PLATFORM
PLATE-FORME A LOGICIEL DE DEVELOPPEMENT DE MEDICAMENT INTEGRE
Patent Applicant/Assignee:
  PHARSIGHT CORPORATION, 321 East Evelyn Avenue, 3rd Floor, Mountain View,
    California 94041, US, US (Residence), US (Nationality), (For all
    designated states except: US)
Patent Applicant/Inventor:
  WEINER Daniel L, 8517 Burnside Drive, Apex, North Carolina 27539, US, US
    (Residence), US (Nationality), (Designated only for: US)
  DUNLAVEY Michael R, 276 Harris Avenue, Needham, Massachusetts 02492, US,
    US (Residence), US (Nationality), (Designated only for: US)
  GILROY Daniel Xavier, 1205 Little Creek Road, Durham, North Carolina
    27713, US, US (Residence), US (Nationality), (Designated only for: US)
  LEARY Robert Hemstreet, 319 Highlands Bluffs Drive, Cary, North Carolina
```

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   27518, US, US (Residence), US (Nationality), (Designated only for: US)
  CHITTENDEN Jason Todd, 3117 Kentish Town Lane, Raleigh, North Carolina
    27612, US, US (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  TOBIN Kent J et al (agent), Townsend and Townsend and Crew LLP, Two
    Embarcadero Center, 8th Floor, San Francisco, California 94111-3834, US
Patent and Priority Information (Country, Number, Date):
  Patent:              WO 200848958 A2-A3 20080424 (WO 0848958)
  Application:         WO 2007US81514 20071016  (PCT/WO US2007081514)
  Priority Application: US 2006852374 20061016; US 2007872369 20071015
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BH BR BW BY BZ CA CH CN CO CR CU CZ DE DK
  DM DO DZ EC EE EG ES FI GB GD GE GH GM GT HN HR HU ID IL IN IS JP KE KG
  KM KN KP KR KZ LA LC LK LR LS LT LU LY MA MD ME MG MK MN MW MX MY MZ NA
  NG NI NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SV SY TJ TM TN
  TR TT TZ UA UG US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC MT
  NL PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7884

Fulltext Availability:
  Detailed Description

Detailed Description
...   receives information from the model 715, the object 717 instructing
  access to observation data (stored at "109lobs.dat"), and the object
  instructing access to dosing data 721 that has already been sent to
  the workflow. The resulting information (the fit data) is
  communicated to reporter object 723, which in turn communicates the
  diagnostic data.

  [0072] Workflow diagrams such as that shown n Figure 7H can serve to
  orient the user, providing an overview of the tasks to be completed, as
  well as a mechanism for navigating to the input settings for each
  task. As shown in Figure 7H, selecting the model 7 15 in the Object
  Browser 716 or in the Workflow Diagram 746 brings up the user...

...0073] The screenshot 745 of Figure 7 1 illustrates a more complex
  workflow 751 displayed in accordance with an embodiment of the present
  invention. The workflow depicted in Figure 71 fits two different
  modes ("Base" and "Final") to a dataset (Main), and then generates
  respective display objects ("Worksheet 1" and "Worksheet 2").  The
  workflow then combines these display objects to form yet another
  object of a subset of results ("Append Worksheets") into a single
  file/view.

  [0074] According to various embodiments of the present invention, users
  can click on any workflow component to view its properties.
  Moreover, workflows, or parts thereof, can be created, saved, and edited,
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and copied, pasted, etc. into other workflows. Workflows may be saved
independent of the underlying data on which they operate. Thus, a
workflow can be saved, and then independently applied to different
data sets.

[0075] Workflow execution can be initiated from any place in the
workflow by just highlighting that component and clicking on
"Execute". That is, a user can execute all, or only a portion of, any
workflow. The status of operations within a workflow
can be indicated to the user by visual or other cue types. For example,
in one embodiment of the present invention, objects that have
successfully...

2/3,K/11   (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01460184   **Image available**
METHODS AND APPARATUSES FOR MONITORING ATTENTION OF A USER DURING A
    COLLABORATION SESSION
PROCEDES ET APPAREILS PERMETTANT DE SURVEILLER L'ATTENTION D'UN UTILISATEUR
    PENDANT UNE SESSION DE COLLABORATION
Patent Applicant/Assignee:
  WEBEX COMMUNICATIONS INC, 3979 Freedom Circle, 9th Floor, Santa Clara, CA
    95054, US, US (Residence), US (Nationality), (For all designated states
    except: US)
Patent Applicant/Inventor:
  CHAWLA Jitendra, 3979 Freedom Circle, Santa Clara, CA 95054, US, US
    (Residence), US (Nationality),
  KNIGHT David, 3979 Freedom Circle, Santa Clara, CA 95054, US, US
    (Residence), US (Nationality),
  WONG Edward, 3979 Freedom Circle, Santa Clara, CA 95054, US, US
    (Residence), US (Nationality),
  KUMAR Manish, 3979 Freedom Circle, Santa Clara, CA 95054, US, US
    (Residence), US (Nationality),
Legal Representative:
  VINCENT Lester J et al (agent), BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP,
    12400 Wilshire Boulevard, 7th Floor, Los Angeles, CA 90025, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200705385 A2-A3 20070111 (WO 0705385)
  Application: WO 2006US24857 20060626   (PCT/WO US2006024857)
  Priority Application: US 2005172239 20050629
Designated States:
(All protection types applied unless otherwise stated - for applications
2004+)
  AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
  DZ EC EE EG ES FI GB GD GE GH GM HN HR HU ID IL IN IS JP KE KG KM KN KP
  KR KZ LA LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ
  OM PG PH PL PT RO RS RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG
  US UZ VC VN ZA ZM ZW
  (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
  PL PT RO SE SI SK TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM

Detailed Description
... visual display area 910 displays content utilized during the
  collaboration session. In one embodiment, the content is textual,
  graphical, audio, and/or video. Further, the content may be
  annotations, conversations, and content presented during the
  collaboration session.

  [0093] In one embodiment, the time line 920 graphically displays a timing
  diagram that...

...such as t0, ti, and t2. For example, t0 may represent the beginning of
  the collaboration session, and t2 may represent the termination of the
  collaboration session. In one embodiment, a marker 921 shows a
  current time location of the collaboration session. For example,
  the marker 921 associates the content displayed within the
  graphical display area 910 with a location of the collaboration
  session.

  [0094] In one embodiment, the activity display 930 graphically
  illustrates the percentage of devices that are actively
  collaboration session. In this example, gradations of 100%, 50%,
  and 0% are shown. However, any number of intervals may be utilized
  without departing from the spirit or scope of the invention. In one
  embodiment, at times to, ti, and t2, the activity display 930
  highlights those participation percentages as milestone time
  periods. In one embodiment, the marker 921 shows the percentage of device
  participation at a particular time.

  [0095] In another embodiment, the activity display 930 graphically
  illustrates the actual number of devices that are actively participating
  in the collaboration session.

  [0096] Figure 10 illustrates an exemplary screen shot 1000 that shows one
  embodiment of the methods and apparatuses for monitoring attention of a
  user during a collaboration session. In one embodiment, the screen shot
  1000 includes a graphical display area 1010, a time line 1020, and an
  activity display 1030.

  [0097] In one embodiment, the visual display area 1010 displays
  content utilized during the collaboration session. In one
  embodiment, the content is textual, graphical, audio, and/or video.
  Further, the content may be annotations, conversations, and
  content presented during the collaboration session.

  [0098] In one embodiment, the time line 1020 graphically displays a
  timing diagram that shows the duration of at least...

...the collaboration session. In one embodiment, a marker 1021 shows a
  current time location of the collaboration session. For example, the

marker 1021 associates the content displayed within the visual
display area 1010 with a location of the collaboration session.

[0099] In one embodiment, the activity display 1030 graphically
identifies devices that are actively participating in the
collaboration session. In this example, pictorial representations
1031 of each device are shown. In one embodiment, a different color of
the pictorial representations 1031 represents whether the device is
actively participating or inactive. In another embodiment, a highlighted
pictorial representation 1031 represents that the device is actively
participating in the collaboration session. However, any number of
pictorial and/or textual representations may be utilized without
departing from the spirit or scope of the invention.

[0100] In one embodiment, at times t0, ti, and t2, the activity
display 1030 highlights those devices that are actively
participating as milestone time periods. In one embodiment, the
marker 1021 shows the devices that are actively participating at a
particular time.

[0101] In another embodiment, the activity display 930 graphically
illustrates the actual number of devices that are actively participating
in the collaboration session.

[0102] The foregoing descriptions of specific embodiments of the
invention have been presented for purposes of illustration and
description.

The invention may be applied...

 2/3,K/12   (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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01445236   **Image available**
SYSTEM AND METHOD FOR MANAGING REVIEW STANDARDS IN DIGITAL DOCUMENTS
SYSTEME ET PROCEDE POUR GERER DES NORMES D'EXAMEN DANS DES DOCUMENTS
   NUMERIQUES
Patent Applicant/Assignee:
  STREAMLINE TECHNOLOGY COMPANY, 16009 SE 136th Street, Renton, WA 98059,
   US, US (Residence), US (Nationality), (For all designated states
   except: US)
Patent Applicant/Inventor:
  KAUFMAN Jason Michael, 16009 SE 136th Street, Renton, WA 98059, US, US
   (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  DOUGLAS Christopher T L (agent), Black Lowe & Graham PLLC, 701 Fifth
   Ave., Suite No. 4800, Seattle, WA 98104, US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 2006127198 A2-A3 20061130 (WO 06127198)
  Application: WO 2006US15652 20060425 (PCT/WO US2006015652)
  Priority Application: US 2005683741 20050523; US 2006379768 20060421
Designated States:
(All protection types applied unless otherwise stated – for applications
2004+)

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AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR
KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG
PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL
PL PT RO SE SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7838

Fulltext Availability:
  Detailed Description

Detailed Description
...  and/or combinations of algorithms are used.

  [0058] In one embodiment there is an area on a graphical user interface
  entitled "My Worklist" which includes content tasks that are
  "Assigned to" a user regardless of "Status". An operation may be
  accomplished by a single click on the task graphic to view
  the task summary/history, further a double-click may be used
  to open the workflow options for reassigning and changing
  status. In alternate embodiments other algorithms and/or
  combinations of algorithms are used.

  [0059] In one embodiment there is an area in the graphical user interface
  entitled "My Requests" and may include content tasks that were
  "requested" (via the Content Request page) by a user.

  [0060] In one embodiment there is an area in the graphical user interface
  entitled "Filter Options" which may provide fields through which
  data in the page may be filtered.

  [0061] In one embodiment there is an area in the graphical user interface
  entitled "Enable Filter" which may toggle...
```

2/3,K/14   (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2010 WIPO/Thomson. All rts. reserv.

00806382
METHOD FOR AFFORDING A MARKET SPACE INTERFACE BETWEEN A PLURALITY OF
    MANUFACTURERS AND SERVICE PROVIDERS AND INSTALLATION MANAGEMENT VIA A
    MARKET SPACE INTERFACE
PROCEDE DE MISE A DISPOSITION D'UNE INTERFACE D'ESPACE DE MARCHE ENTRE UNE
    PLURALITE DE FABRICANTS ET DES FOURNISSEURS DE SERVICES ET GESTION
    D'UNE INSTALLATION VIA UNE INTERFACE D'ESPACE DE MARCHE
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):

MIKURAK Michael G, 108 Englewood Blvd., Hamilton, NJ 08610, US,
Legal Representative:
  HICKMAN Paul L (et al) (agent), Oppenheimer Wolff & Donnelly LLP, 1400
    Page Mill Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200139028 A2 20010531 (WO 0139028)
  Application: WO 2000US32308 20001122 (PCT/WO US0032308)
  Priority Application: US 99444773 19991122; US 99444798 19991122
Designated States:
(Protection type is "patent" unless otherwise stated - for applications
prior to 2004)
  AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE
  ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
  MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
  TZ UA UG UZ VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 170977

Fulltext Availability:
  Detailed Description

Detailed Description
... with an embodiment of the present invention. In operation 702,
  information is received from at least one service provider utilizing a
  network. This information includes information relating to the
  service provided by the service provider. Also received utilizing the
  network is information from at least one manufacturer in operation 704.
  This...

...the manufacturer offerings and the service and manufacturer offerings
  inforination are utilized to manage installations in operation 708.

  In an embodiment of the present invention, collaboration between
  the matched service provider and the manufacturer may also be managed. In
  such an embodiment, the management of collaboration may include
  facilitating the transmitting of information between the matched
  service provider and the manufacturer utilizing the network. In an aspect
  of this embodiment, a collaborative planning tool] may be provided
  for managing the collaboration between the matched service provider
  and the manufacturer.

  In another embodiment of the present invention, milestone based
  project planning may be facilitated between the matched service provider
  and the manufacturer. In a further embodiment, the manufacturer offerings
  of the matched manufacturer...

...may be displayed to the matched manufacturer utilizing the network.

  30
  In an aspect of the present invention, the inforination of the
  manufacturer may include information relating to the availability

of the manufacturer offerings. In such an aspect, the service provider
may be notified of the availability of the manufacturer offerings...

 2/3,K/15   (Item 1 from file: 351)
DIALOG(R)File 351:Derwent WPI
(c) 2010 Thomson Reuters. All rts. reserv.

0012808439
WPI ACC NO: 2002-665511/200271
XRPX Acc No: N2002-526487
Subcontractor activity management method in satellite construction project,
involves indicating changed status of subcontractor in status indicator
provided on electronic dashboard
Patent Assignee: FIELY-FISHER B (FIEL-I); FREEMAN D M (FREE-I); HALVERSON
  M (HALV-I); LEWIS S (LEWI-I); GEN ELECTRIC CAPITAL CORP (GENE)
Inventor: FIELY-FISHER B; FREEMAN D M; HALVERSON M; LEWIS S
Patent Family (2 patents, 1 countries)
Patent   Application
Number   Kind Date   Number   Kind   Date   Update
US 20020087381   A1 20020704 US 2000750350   A 20001229 200271 B
US 7031930   B2 20060418 US 2000750350   A 20001229 200627 E

Priority Applications (no., kind, date): US 2000750350 A 20001229

Patent Details
Number   Kind Lan   Pg   Dwg Filing Notes
US 20020087381   A1 EN   12   7
Original Publication Data by Authority

Argentina

Assignee name & address:
Original Abstracts:
...in specification or anticipates any other reason that might delay
completion of construction as scheduled, the subcontractor selects from a
computerized menu the appropriate new status for the subcontractor's
task and provides other information relevant to the changed
situation. The status change is displayed on a display device,
an electronic dashboard, so as to be easily noticed, the
dashboard also providing one-click links to a display
showing how widespread are the problems and a display for
on-line review and approval of the status change by a manager or
engineer in charge of the project, who notes the status change
on the display and with whatever input may be provided by the other
persons notified of the status change, decides the best course of
action to keep the construction on schedule.
Claims:

 5/3,K/1   (Item 1 from file: 1)
DIALOG(R)File   1:ERIC
(c) format only 2010 Dialog. All rts. reserv.

0009760034 ERIC NO.: ED432292
Top 20 Collaborative Internet-Based Science Projects of 1998:
Characteristics and Comparisons to Exemplary Science Instruction.

Berg, Craig A.; Jefson, Cristy
8pp.
March 1999 (19990300)
NOTES: In: SITE 99: Society for Information Technology & Teacher Education
International Conference (10th, San Antonio, TX, February 28-March 4,
1999); see IR 019 584.

This paper utilizes the characteristics of model science instruction to
identify exemplary Internet-based science collaborations. The filter
for attaining "exemplary" status was based on state and national
standards-generating initiatives and the corresponding implications for
appropriate student activity in science classrooms. Twenty examples
of online collaboration are identified, described, and used as models
that contain the basic components of effective online science
collaboration. These models are separated into the following
categories: (1) observation and sampling of wildlife (self-collected
data); (2) observation and sampling of wildlife (scientist-collected
data); (3) observation and sampling of self-characteristics; (4)
sampling and analysis of environmental data; (5) resource awareness
and consumption; (6) content-related, participant-dependent
calculation; and (7) problem solving and engineering. The models also serve
to highlight ancillary features that make online collaborative
investigations even more effective. (Author/MES)

 5/3,K/2   (Item 1 from file: 13)
DIALOG(R)File 13:BAMP
(c) 2010 Gale/Cengage. All rts. reserv.

00744371   Supplier Number: 24908877 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Mid-market magnetism
(Supply chain management software vendors have targeted mid-sized firms)
Article Author(s): Dilger, Karen Abramic
MSI, v 19, n 7, p 12
July 2001
DOCUMENT TYPE: Journal ISSN: 0748-948X (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 735

 (USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...to "part numbers," while another uses the term SKU.

PkMS Pronto includes three new add-on modules. The Warehouse Control Center
graphically represents ongoing facility activity using charts and
graphs to highlight bottlenecks and plant processes. Asset Management
combines elements of performance management and activity-based
costing by focusing on usage figures regarding people, teams, and
equipment. Pronto Exchange is a collaboration tool for outbound
processes, including functionality for order status and alert
messaging. "Pronto Exchange can be used to Web crawl to sites, such as UPS
or FedEx, to obtain data and pull it back to the user," says Conroy.

Conroy estimates the total cost of the system to be in the $250,000 range,

with...

...TEXT: has just launched its Genesis Edition aimed at the low volume
user.

INPUTACCEL EZ 2.2 FROM INPUT SOFTWARE

(Table Omitted)

Input Software has approached data capture and forms processing from
the top down. Having established InputAccel as a totally scalable system
with no limit on the numbers of users or...

...pronounced in American 'ee-zee' (easy), it has made the process just
that. The system provides a wizard that takes you through setting up the
workflow. The result is the ability to place an icon on the desktop
that runs the capture and recognition process at a click. They call
this 'Point-Click-Scan'. So a small company with a limited number of
forms can set up the system using an icon for each different form.

For those who want to be more involved in the process, the workflow
'IA/Watchdog', lists each task in the process and allows you to run
the tasks manually or automatically. If you want to check the recognition
status of poor quality forms, then just make the next task
after recognition manual.

One limit to EZ is recognition. Only full text and zonal OCR are available.
However, multiple ICR and OMR modules are available...

...   Custom reports and advanced search for drill-down visibility
      -- E-mail notifications for alerts and updates

-- Quick start project cloning and import from Microsoft Project
        -- Workflow integration with Macromedia Dreamweaver(R) 4 and
Macromedia
        Dreamweaver UltraDev(TM) 4 software applications
        -- Cross-browser and cross-platform support
        -- File management
        -- Transparent file versioning
        -- Requires no change from how teams already access files
        -- One-click archiving to create snapshots of project files
        -- Associate files with tasks: launch, edit, and save the correct
file
        -- Search for files by associated task
        -- Works with any design and/or development product
        -- Automated disk management utilities keep disk space free
        -- Integrated version comments with Dreamweaver and UltraDev
        -- Client communications
        -- Fully customizable templates for secure, professional project
sites
        -- Client interface for tasks, requests, file upload and project
status
        facilitates getting client deliverables on time
        -- Online review and approval including automatic approval logging
        -- Manage project site content directly from the browser
        -- Unlimited client user accounts at no extra charge
        "It is really nice to be able to have an overview of an...

 5/3,K/5   (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

08395936   Supplier Number: 71242621 (USE FORMAT 7 FOR FULLTEXT)
CorVu Announces RapidScorecard; A Revolution in Balanced Scorecard
  Automation.
PR Newswire, pNA
March 6, 2001
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 581

...   then encode an understanding of the evolving business."
        The application includes various standard reports organized into
three main categories, as follows:
        * Performance Reports - designed to highlight performance
results by
        Company, Business Unit, Perspective, Objective, or any combination
        thereof.
        * Initiative Reports - designed to highlight project
status and activity
        associated with Strategic Initiatives.
        * Alignment Reports - designed to highlight the alignment, or
lack
        thereof, between activities and strategy.
        About CorVu Corporation
        CorVu Corporation is a global provider of enterprise business
performance management, e-business intelligence and Balanced Scorecard

solutions. Combining OLAP query and reporting, executive dashboard
alerts and forecasting, CorVu's solutions offer information analysis
capabilities that empower our customers to achieve strategic objectives and
improve business performance. CorVu provides a comprehensive business
performance management solution to over 2500 customers, including leading
suppliers in manufacturing, telecommunications, insurance, financial
services, banking, aerospace, transportation, healthcare and the public
sector. For more information, please visit www.corvu.com or call
800.610.0769.
        * CorVu is a registered trademark of CorVu Corporation.

 5/3,K/6   (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

08061799   Supplier Number: 67177818 (USE FORMAT 7 FOR FULLTEXT)
eDeploy.com Announces Availability of eDeploy Version 1.5.
Business Wire, p2280
Nov 21, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 498

...   set of eLearning modules
     addressing the features and use of eDeploy Version 1.5.

- Enhanced Security Features allow project managers to control users' acces
s to
     information screens as well as to posted project documents.

- Project Setup Wizards dramatically streamline the efforts needed to popul
ate
     a new eDeploy project with task information
. The "template library" is of great

value for standardizing project work processes and promoting the use of "be
st
     practices."

- New Project Site Collateral List is a valuable feature for project teams
who

need to constantly monitor site collateral files (such as site surveys) as
they
     are posted.

     - New Site Dashboard enables a user to click
 on a site name in a site list, and
     see at a glance the task status and alerts for this site.

- New Notification Occurrences extends the range of alert conditions that a

project manager can monitor. New options bring increased flexibility and
     granularity in meeting a project's specific alert needs.

     - My Shortcuts shortens the amount of drill-down to get to particular
     information
 screens. It is especially helpful for those users who consistently
     access selected eDeploy screens.

     - My Task List is a new dashboard display that shows all...

 5/3,K/7   (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

07795364   Supplier Number: 65126342 (USE FORMAT 7 FOR FULLTEXT)
Virage Launches ControlCenter(TM) Along With German and Italian Speech to
  Text Engines for Virage AudioLogger(TM).
PR Newswire, pNA
Sept 11, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1037

...   remotely controls and automates the SmartEncode(TM) process of
simultaneous video capture, encoding and indexing for multiple VideoLogger
applications. ControlCenter provides centralized, remote control over
content coming into each VideoLogger. By managing multiple
VideoLoggers concurrently, ControlCenter builds enormous efficiencies into
the video streaming media workflow. ControlCenter allows users to
scale their VideoLogger environment without adding overhead. ControlCenter
has been engineered to allow maximum orchestration of mission-critical
events with minimal online navigation. Single-point administration allows
immediate access and control of a network of VideoLogger activity
with the click of a mouse.
       ControlCenter provides complete flexibility in scheduling events.
Users can orchestrate one or more events on multiple VideoLoggers and
specify detailed properties for each session. Variable timeline views show
the availability of VideoLogger resources at any time. Built to accommodate
real life workflow variations, ControlCenter delivers maximum
automation, flexibility and control.
       Proactive, Real-Time Status Monitoring
       The ControlCenter interface provides a wealth of information
at a glance. Video capture thumbnails display incoming feeds in real time
and instantly reveal the status of any VideoLogger across the
network. The Calendar and Event windows make it easy to program, navigate
and locate scheduled events. Detailed log files for...

 5/3,K/8   (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

07450984   Supplier Number: 62663812 (USE FORMAT 7 FOR FULLTEXT)
Anthem Blue Cross and Blue Shield in New Hampshire And Confer Software

Collaborate to Offer Proven Health Management Solution.
PR Newswire, pNA
June 12, 2000
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1166

...   living
      The CHF health management application precisely mirrors Anthem BCBS'
existing telephonic nurse care manager model. Features of the application,
based on clinical processes and content provided by Anthem BCBS,
include:
      -- User-friendly interface with daily, automated "To-Do" lists based
on
      stage of workflow, which are then routed to appropriate
administrative
      and clinical staff members
      -- Comprehensive task history which documents all patient
activity at
      every workflow stage
      -- Embedded counseling recommendations with point-and-click
fields for
      documenting interventions, submitting changes in status and
assigning
      readiness to change
      -- Customized member summary reports for distribution to the
patient's
      provider outlining member responses to questionnaires and telephone
      interview, as...

 5/3,K/9   (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

05725560   Supplier Number: 50201578   (USE FORMAT 7 FOR FULLTEXT)
Netmosphere Delivers Team-Based Project Management for the Enterprise
PR Newswire, p727LAM053
July 27, 1998
Language: English   Record Type: Fulltext
Article Type: Article
Document Type: Newswire; Trade
Word Count: 823

...   making it easier to see where a individual might be overloaded.
      Flexible, Real-Time Communication
      ActionPlan 3.0 lets team members communicate and share project
information in a number of convenient ways. With automatic email
notification and off-line access, ActionPlan makes it easy for team members
to communicate schedules, tasks, to-do lists, updates, past-due items, and
other project related information.
      With a Java-based, thin-client architecture, ActionPlan uses a web
server to distribute and update ActionPlan thin-clients. The
thin-client components of the application offer the convenience of
point-and-click web page distribution with the high interactivity of
a desktop application.

Pricing & Availability
     ActionPlan 3.0 is available now and can be purchased directly from the
company. Pricing for the collaboration server is $10,000 for a
department, serving up to 500, or $25,000 for an enterprise server, which
serves over 2,000. ActionPlan clients are $200. HotSheet (task list)
clients are available for $50.
     About Netmosphere
     Netmosphere develops and markets software to support geographically
dispersed project teams. Netmosphere products enable teams of people...

 5/3,K/10   (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

04689702   Supplier Number: 46902735 (USE FORMAT 7 FOR FULLTEXT)
Domino.Merchant Transforms a Web Site Into a Powerful Selling Engine
PR Newswire, p1118NEM052
Nov 18, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 985

...   interactive communications, collaboration and workflow to create
Web applications. Domino.Action works with Domino to provide a solution for
easily creating and deploying innovative and content-rich Web sites.
Domino.Merchant enables companies to go beyond a basic Internet storefront
and leverage the data collected from their commerce site. Through
Domino.Merchant's point-and-click user interface, companies will be
able to:

        -- create product catalogs with multimedia content,
        -- update catalog and pricing information
 in a multi-user setting,
        -- track sales activity via built-in reports,
        -- host customer feedback and suggestion forums,
        -- build workflow
 applications to support fulfillment of the products
          sold.
     In addition, Domino.Merchant will create a sophisticated commerce
platform for Lotus Business Partners and third-parties...

 5/3,K/11   (Item 8 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

04555684   Supplier Number: 46695758 (USE FORMAT 7 FOR FULLTEXT)
Reach crafts WorkMan upgrade
PC Week, p014
Sept 9, 1996
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 279

     WorkMan 2.1 gives users point-and-click routing and tracking of

files, documents and Web links from Exchange, Windows 95, Netscape Communications Corp.'s Navigator and other browsers. It also allows users to create workflow tasks that track and manage documents and URLs.

The upgrade's new Route & Track application agents allow users to create and modify workflow processes from these and other platforms, including PC Docs Inc.'s document management system and Exchange.

Users can access the workflow applications by clicking on E-mail messages or via the WorkMan task-list folder entry in Exchange, said Reach officials in Sunnyvale, Calif. Version 2.1 can also route Exchange folders and E-mail messages.

The upgrade, which starts at $300, features a complete history of the workflow and a graphical status view of users in the process, said officials.

Tight integration with PC Docs allows users to select documents and choose between predefined workflow routes or the creation of ad hoc routing. It also updates the activity log with information about who currently has a document and provides time and date stamps on those documents.

"Its graphical interface lets users easily create and modify workflows," said Lawrence Chew, a beta tester and analyst with Harris Corp., in Redwood Shores, Calif.

The WorkMan WorkMap is a robust visual workflow process tool that lets administrators create enterprisewide workflows without additional scripting. Reach also offers a WorkMan developer's kit for creating agents that integrate WorkMan...

 5/3,K/12   (Item 9 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

04291529   Supplier Number: 46289172 (USE FORMAT 7 FOR FULLTEXT)
Novell readies workflow application for GroupWise
PC Week, p120
April 8, 1996
Language: English   Record Type: Fulltext
Document Type: Magazine/Journal; Tabloid; General Trade
Word Count: 255

...   its GroupWise group-collaboration software.
Co-developed with FileNet Corp., GroupWise Workflow enables users to automates the process of routing E-mail, calendaring and scheduling information, and voice mail to multiple co-workers, Novell officials said at NetWorld+Interop here last week.

The software gives users a point-and-click interface for constructing complex workflows. Users can drag and drop icons that represent people and objects in the system to the program's Workflow Canvas and draw arrows to link the icons in sequential or conditional routes, said officials from Novell's Groupware division, in Orem, Utah.

The workflow program is tightly integrated with the GroupWise in-box, which makes participation in the workflow as easy as using E-mail, officials said. Users defined in a workflow will automatically receive a message in their in-boxes when it's time for them to complete a task in the group project.

"As E-mail systems become more complex, users want more functionality," said Mark Levitt, an analyst at International Data

Corp., in Framingham, Mass. "Workflow is one of those obvious
applications that leverages the E-mail infrastructure."
     The GroupWise address book will allow workflow authors to assign
individual people to each step. The authors can attach objects required for
the task and establish security levels for each individual in the
workgroup, officials noted. The author can also check the status of
the work in progress and work completed by each participant.
     Pricing for GroupWise Workflow has not been set.

 5/3,K/13   (Item 10 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2010 Gale/Cengage. All rts. reserv.

04284619   Supplier Number: 46278701 (USE FORMAT 7 FOR FULLTEXT)
GROUPWISE WORKFLOW INCREASES THE EFFICIENCY OF WORK PROCESSES
PR Newswire, p0402SJTU006
April 2, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 748

...   our customers a compelling reason to implement a workflow
solution."
     "GroupWise WorkFlow is an absolute world-beater of a product," said
Connie Moore, director, Giga Information Group, a leading Information
Technology Advisory Group. "When we look back two years from now, the
GroupWise WorkFlow introduction will be a defining moment in...

...developed with FileNet Corporation, GroupWise WorkFlow enables GroupWise
users to become workflow authors. With its point-and-click user interface,
GroupWise WorkFlow makes constructing a workflow as simple as
dragging icons, which represent people and objects in the system, to the
WorkFlow Canvas and drawing arrows to link these icons in sequential,
broadcast or conditional routes.
     The GroupWise address book allows workflow authors to assign
people to each workflow step. With each step in the work process, the
author can include detailed instructions, attach documents and objects
required to complete the task, define specific responses and
establish security levels for each participant. Once a workflow is
implemented, the author can receive the status of the work in
process, which shows exactly who has the work and what they've done with
it.
     Participating in a WorkFlow
     GroupWise WorkFlow, tightly integrated with GroupWise, makes
participating in workflows as simple as using E-mail. If a user has been
defined as a workflow participant, they will receive a message in
their Universal In Box when it is time for them to participate in a
particular work process. Opening the message displays the assignment in a
simple dialog box with instructions for completing the task. Users
can respond to the workflow author, asking questions and making
clarifications, and when the task is completed, GroupWise
WorkFlow automatically routes the message to the next participants.
     For more information about GroupWise WorkFlow, customers can
call 800-NET-WARE or visit Novell's home page at http: www.novell.com.
     Novell is the world's leading network software provider. Novell

software provides the infrastructure for a networked world, enabling our
customers to connect with other people and the information they need,
anytime and anyplace. Novell partners with other technology and market
leaders to help customers make networks a part of their everyday lives.
    NOTE...

 5/3,K/14   (Item 11 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

03030149   Supplier Number: 44117514   (USE FORMAT 7 FOR FULLTEXT)
ALGOR INTRODUCES MAJOR BREAKTHROUGH IN HUMAN INTERFACING FOR MECHANICAL
  DESIGN AND ANALYSIS COMPUTER SOFTWARE
PR Newswire, p1
Sept 24, 1993
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 629

...   flow charts to walk users
     step-by-step through the process of optimizing and engineering their
     designs using Algor software.

     When an engineer selects a task
 from the primary Roadmap, a screen
     for the task displays a flow chart of the process in Algor. A
click
     of the mouse at any step automatically takes the user into the
     appropriate Algor feature required to perform that step.

     Each Roadmaps screen incorporates "billboards,11 context
- sensitive,
     task
-oriented help windows that explain each step of the process. A
     "dashboard" at the bottom of the screen shows function keys and
     current status information
. "Forks in the road" at key engineering
     decision-making points identify possible options and the ramification
     of each. There are many helpful "sign posts" to...

 5/3,K/15   (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

28055581 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Research and Markets: Advances in Enzyme Technology for the Food Industry
M2 PRESSWIRE
March 12, 2003
JOURNAL CODE: WMPR   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 1280

   (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   Of course, foods often contain naturally-occurring enzymes that

cause the foods to degrade. It may be possible to develop ingredients that inhibit this enzymatic activity and improve shelf life and other sensory qualities of a product.

An Opportunity To Learn

Now you can have an opportunity to learn more about...

... universities, companies and government research labs that will help you advance your company`s own work in the field. This report reviews key processes and highlights significant data, including the potential applications for each process, its status of development, and when it will be commercially available.

You`ll also learn how to take advantage of these technologies, either through licensing or other collaborative arrangements, so that you can use them commercially before your competitors do.

Learn about several developments, including:

A canning process that uses lower-than-normal...

5/3,K/16   (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2010 Dialog. All rts. reserv.

28055579 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Research and Markets: Advances in Nutritional and Fat Reduction Technologies
M2 PRESSWIRE
March 12, 2003
JOURNAL CODE: WMPR   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 1276

  (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   health-promoting benefits.

A nontransgenically modified soybean that yields oil that does not have to be hydrogenated.

A new milk concentrate that demonstrates anti-inflammatory activity.

A prototype process that separates whey into at least five proteins economically.

A corn that yields a salt substitute that has no sodium.

Advances in Nutritional and Fat Reduction Technologies reviews significant developments in the field, discussing potential applications and the status of development, so that you`ll also learn how to take advantage of these new technologies through licensing or other collaborations. Contact information is provided for key researchers. This report will help you track new nutritional and fat-reduction developments and contact experts with whom you can collaborate on innovative research. Order Advances in Nutritional and Fat Reduction Technologies and tap into innovations that will help you meet your product development goals.

For a complete index of this report click on http://www.researchandmarkets.com/reports/19657

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1. Executive Summary

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5/3,K/17   (Item 3 from file: 20)

21451362 (USE FORMAT 7 OR 9 FOR FULLTEXT)
RosettaNet   Achieves   Record   Number   High Technology B2B Production
    Implementations On a Global Scale
BUSINESS WIRE
February 26, 2002
JOURNAL CODE: WBWE   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 1145

  (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   and responses related to Work-in-Process (WIP) on the factory
floor, allowing for flexibility of operations through improved visibility
into supplier WIP.
    Supply Chain Information Management
    The Collaborative Forecasting Program, led by STMicroelectronics and
Texas Instruments, and the iHub initiative, sponsored by Cisco Systems,
focused on automating the forecasting process and synchronizing supply and
demand.
    As a result of these Milestone Programs, trading partners
improved the management of inventories, product turns and on-time delivery
during the implementation of multiple PIPs in a production environment.
    In addition to the Milestone Program activity in 2001,
RosettaNet also focused its efforts on a global expansion strategy with
the official launch of RosettaNet Malaysia. Other key highlights
included the formation of the RosettaNet Solution Provider Board (SP) and
formal roll-out of the RosettaNet Ready(TM) software compliance program.
    To learn more about RosettaNet's Milestone Programs or to
participate in ongoing consortium initiatives, visit the RosettaNet Web
site at www.rosettanet.org .
    About RosettaNet
    RosettaNet is an independent, non-profit consortium dedicated to the
collaborative development and rapid deployment of open Internet-based
business standards that align processes within the global high-technology
trading network.
    More than 400 companies representing more than $1 trillion in annual
information technology, electronic components and semiconductor
manufacturing revenues currently participate in RosettaNet's Standards
development, strategy and implementation activities. A complete list of
member companies and more information on RosettaNet is available at
www.rosettanet.org .
    --30--JE/np* KT/np EZ/np CONTACT: RosettaNet Lynda Yana, 714/480-3806
lynda.yana@rosettanet...

5/3,K/18   (Item 4 from file: 20)

10057366
WomenCONNECT.com Publishes Detailed Status Report On Gays & Lesbians

'Coming Out' in the Workplace
PR NEWSWIRE
March 14, 2000
JOURNAL CODE: WPRW   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 323

     ... came out" are seen as better managers * Positive & negative
personal experiences from gays & lesbians who revealed sexual orientation
at   work   WHO   provided expert opinion and data to the status
report? Ellen Uzelac is a womenCONNECT.com contributor who writes on
business, workplace and work/family issues. She is a former national
correspondent and West...

...chief for the Baltimore Sun and is the author of Lost & Found: A Journey
Through Grief. Shelley Alpern, The Equality Project Selisse Berry, The
Pride Collaborative Paula Ettlebrick, National Gay & Lesbian
Task Force Policy Institute Grant Luckenbill, Gay & Lesbian Values
Index Shelly Meyers, Meyers Pride Value Fund WHEN will the status
report be posted? Beginning Wednesday, March 15, 2000 The report can also
be found using womenCONNECT.com's "search" feature HOW can visitors read
the status report? Simply visit www.womenCONNECT.com, locate the
report and click WHERE will the status report be posted?
www.womenCONNECT.com - The leading online source of business, career, and
personal finance information and resources for women.
     CONTACT: Sara   Gilbertson,   Senior   Vice   President, Marketing,
womenCONNECT.com, 703-918-6989 or email: sgilbertson@womenconnect.com; or
Wayne Henninger or...

 5/3,K/19   (Item 5 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2010 Dialog. All rts. reserv.

07841081 (USE FORMAT 7 OR 9 FOR FULLTEXT)
MAPICS: Mapics delivers integrated workflow solution
M2 PRESSWIRE
October 20, 1999
JOURNAL CODE: WMPR   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 576

  (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   tasks. It prompts users for activities that need to be performed,
minimising the risk of error involved in finding different programs and
locating the necessary information to perform a task or make a
business decision. It also determines the status of work tasks and
automatically activates the next task to be accomplished.
     MAPICS XA Workflow is a true client/server system, which enables the
application to be run in the Microsoft Windows operating system...

... supports all major databases including native support for Oracle,
Sybase, Microsoft SQL Server and Lotus Notes. The database connector
component allows developers to access and update any database or
combination of databases within a single workflow.
     This feature simplifies the task of deploying applications
across multiple databases and architectures that may be employed in the

various departments or divisions of an organisation. In addition, MAPICS XA Workflow features "One-Click " Web Deployment capability. Client-server applications developed using these tools can be deployed to the web in seconds with the Application Builder. Users can have...

 5/3,K/20   (Item 6 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2010 Dialog. All rts. reserv.

06962961 (USE FORMAT 7 OR 9 FOR FULLTEXT)
MAPICS Delivers Integrated Workflow Solution; New Workflow Tool Provides
   Customers with Real-Time Application to Streamline Operations
BUSINESS WIRE
August 31, 1999
JOURNAL CODE: WBWE   LANGUAGE: English   RECORD TYPE: FULLTEXT
WORD COUNT: 923

  (USE FORMAT 7 OR 9 FOR FULLTEXT)

...   tasks. It prompts users for activities that need to be performed,
minimizing the risk of error involved in finding different programs and
locating the necessary information to perform a task or make a
business decision. It also determines the status of work tasks and
automatically activates the next task to be accomplished.
    MAPICS XA Workflow is a true client/server system, which enables the
application to be run in the Microsoft Windows(TM) operating...

... supports all major databases including native support for Oracle,
Sybase, Microsoft SQL Server and Lotus Notes. The database connector
component allows developers to access and update any database or
combination of databases within a single workflow. This feature
simplifies the task of deploying applications across multiple
databases and architectures that may be employed in the various departments
or divisions of an organization. In addition, MAPICS XA Workflow
 features "One-Click " Web Deployment capability. Client-server
applications developed using these tools can be deployed to the web in
seconds with the Application Builder. Users can have...

 5/3,K/21   (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2010 Gale/Cengage. All rts. reserv.

06359652   SUPPLIER NUMBER: 87428210   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Preconference activities expand the ANI learning experience.(Brief Article)
Healthcare Financial Management, 56, 6, S10(1)
June, 2002
DOCUMENT TYPE: Brief Article   ISSN: 0735-0732   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 429   LINE COUNT: 00042

      Patient Financial Services Conference--Magic Million-Dollar
Bottom-Line Solutions will begin with an update of trends affecting
patient financial services and the goals and achievements of HFMAs PFS
Task Force. Next will be a discussion of million-dollar solutions in

the revenue cycle and practical ways participants can redesign
workflow processes to take advantage of transaction standards.
Highlights include developing effective communication, using
technology to improve the quality and completeness of information,
identifying internal and external resources to keep the budget and time
line intact, and understanding ways the Health Insurance Portability and
Accountability Act of 1966...

 5/3,K/22   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c) 2010 Gale/Cengage. All rts. reserv.

0020353715   SUPPLIER NUMBER: 98718002   (USE FORMAT 7 OR 9 FOR FULL
TEXT)
Advances in Enzyme Technology for the Food Industry.
M2 Presswire, NA
March 12, 2003
LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 1401   LINE COUNT: 00135

...   Of course, foods often contain naturally-occurring enzymes that
cause the foods to degrade. It may be possible to develop ingredients that
inhibit this enzymatic activity and improve shelf life and other
sensory qualities of a product.
      An Opportunity To Learn
      Now you can have an opportunity to learn more about...

...universities, companies and government research labs that will help you
advance your company`s own work in the field. This report reviews key
processes and highlights significant data, including the
potential applications for each process, its status of development,
and when it will be commercially available.
      You`ll also learn how to take advantage of these technologies,
either through licensing or other collaborative arrangements, so that
you can use them commercially before your competitors do.
      Learn about several developments, including:
      A canning process that uses lower-than-normal...

 5/3,K/23   (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c) 2010 Gale/Cengage. All rts. reserv.

0020353713   SUPPLIER NUMBER: 98718000   (USE FORMAT 7 OR 9 FOR FULL
TEXT)
Advances in Nutritional and Fat Reduction Technologies.
M2 Presswire, NA
March 12, 2003
LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 1400   LINE COUNT: 00135

...   health-promoting benefits.
      A nontransgenically modified soybean that yields oil that does not
have to be hydrogenated.
      A new milk concentrate that demonstrates anti-inflammatory

activity.
A prototype process that separates whey into at least five proteins economically.
A corn that yields a salt substitute that has no sodium.
Advances in Nutritional and Fat Reduction Technologies reviews significant developments in the field, discussing potential applications and the status of development, so that you`ll also learn how to take advantage of these new technologies through licensing or other collaborations. Contact information is provided for key researchers. This report will help you track new nutritional and fat-reduction developments and contact experts with whom you can collaborate on innovative research. Order Advances in Nutritional and Fat Reduction Technologies and tap into innovations that will help you meet your product development goals.
For a complete index of this report click on
http://www.researchandmarkets.com/reports/19657
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 5/3,K/24   (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c) 2010 Gale/Cengage. All rts. reserv.

0019772495   SUPPLIER NUMBER: 56645594   (USE FORMAT 7 OR 9 FOR FULL TEXT)
MAPICS: Mapics delivers integrated workflow solution >T.
M2 Presswire, NA
Oct 20, 1999
LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 646   LINE COUNT: 00059

...   tasks. It prompts users for activities that need to be performed, minimising the risk of error involved in finding different programs and locating the necessary information to perform a task or make a business decision. It also determines the status of work tasks and automatically activates the next task to be accomplished.
MAPICS XA Workflow is a true client/server system, which enables the application to be run in the Microsoft Windows operating system...

...supports all major databases including native support for Oracle, Sybase, Microsoft SQL Server and Lotus Notes. The database connector component allows developers to access and update any database or combination of databases within a single workflow.
This feature simplifies the task of deploying applications across multiple databases and architectures that may be employed in the various departments or divisions of an organisation. In addition, MAPICS XA Workflow features "One-Click" Web Deployment capability. Client-server applications developed using these tools can be deployed to the web in seconds with the Application Builder. Users can have...

 5/3,K/25   (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

16378578   SUPPLIER NUMBER: 108284267   (USE FORMAT 7 OR 9 FOR FULL TEXT
)
Threats From Inside -- Network security entails multiple layers.
Heath, Chet
VARbusiness, 43
Sept 29, 2003
ISSN: 0894-5802   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 1105   LINE COUNT: 00091

...   uniform-control utility that works with security blades, host-based
applications, appliance boxes or firewall/VPN software in generic server
boxes. One such utility is Check Point's Smart Dashboard.
It has a GUI with a topology display, where VPN, firewall, QoS,
network-address translation and personal firewall policy editors are
integrated into a single application. Policies for each enforcement
node are a click away. Alerts are delivered to a common point,
and deployment of policies, management and upgrades are similarly
efficient.
     The most important mission of a coordinated, centrally managed
perimeter and point-of-attack approach is to stop unauthorized insiders
from accessing secure data or tapping critical data in-stream
on a network. Although it won't stop spies like Aldrich Ames, John Walker
or Christopher Boyce, who betray the trust of legitimate...

 5/3,K/26   (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

02480937   SUPPLIER NUMBER: 71266790   (USE FORMAT 7 OR 9 FOR FULL TEXT)
FastTrack Schedule 7.0.(Software Review)(Evaluation)
HECK, MIKE
Macworld, 18, 4, 80
April, 2001
DOCUMENT TYPE: Evaluation   ISSN: 0741-8647   LANGUAGE: English
RECORD TYPE: Fulltext
WORD COUNT: 453   LINE COUNT: 00042

...   efficient ways to build complex plans, as well as finer control
over schedules. As you outline projects, you can easily assign multiple
resources and view task details using a single data-entry
form. The new Editable Links option determines the amount of time during
which tasks can overlap or that must elapse before the next activity
begins. Once you link tasks, FastTrack highlights the critical path
for you.
     Multiple Ways to Collaborate
     FastTrack Schedule 7.0 bests its predecessors with improved support
for collaboration. It can read the PC version's files; exchange
data with Microsoft Project 2000; and when used with the $99
FastTrack Schedule 7.0 for Palm OS, synchronize schedules with Palm
organizers.
     It can also convert schedules to HTML pages, but that's where its Web
capabilities stop. If your clients and remote employees need to access and
update real-time project data, elite.com's Web-based

project-management application, Worksolv ($19.95 per month), may be a good alternative. Though it lacks high-end resource-management functions, the service is easy to use and promotes better communication and collaboration.

    FASTTRACK SCHEDULE 7.0
    Rating: *
    Pros: Quick scheduling and updating in Calendar view; improved scheduling accuracy; simple interface.
    Cons: Not appropriate for very large or...

 5/3,K/27   (Item 1 from file: 492)
DIALOG(R)File 492:Arizona Repub/Phoenix Gaz
(c) 2002 Phoenix Newspapers. All rts. reserv.

09076168
DID YOU CATCH THE NEWS TODAY?
Arizona Republic (AR) - Monday, March 17, 1997
By: David Hoye, The Arizona Republic
Edition: Final Chaser Section: Business Computing Page: E1
Word Count: 767

...looks like a small, black pyramid and an AC adapter for the antenna.

    The system installed quickly on my computer at work. It creates a task bar that sits at the top of the screen. But, like any program, it can be minimized to the Windows 95 task bar.

    NewsCatcher also puts an icon near the clock on the Windows 95 task bar. Clicking on this provides the user with a series of status indicators that show, among other things, the strength of AirMedia's broadcast signal.

   Once installed, NewsCatcher does its thing by itself. You can go about your computing business while NewsCatcher stands watch in the background, collecting the latest information.
    AirMedia scans news and information sources on the Internet, including   Reuters   and   Knight-Ridder,   and   distributes the latest information via its broadcast network.

    Whenever the pyramid near your PC receives an update from AirMedia, a little icon flies across your screen to the NewsCatcher task bar .Click on it to read the update, or wait for several to collect, then read them in a handy "newspaper" view.

    The icons correspond to the type of information collected. Dollar signs indicate business news, a hot-air balloon indicates entertainment news and so forth.

   There's also a "remote control" feature that looks...

 5/3,K/28   (Item 1 from file: 587)
DIALOG(R)File 587:Jane`s Defense&Aerospace
(c) 2009 Jane`s Information Group. All rts. reserv.

10911248   Word Count:438
RESEARCH - BAE Systems
JANE'S DEFENCE INDUSTRY   (JDIR)   OCTOBER 01, 2002 v.019 no. 010
Section Heading: RESEARCH

...terrain at the University of Sydney's test-range in Marulan,
New South Wales. The UAVs sensed a number of artificial ground
features, processed the data on board and built a real-time picture
of ground activity.

"Processing, sharing and fusing the ground picture, without any
central processing facility, makes decentralised networks attractive
from a reliability, scalability and flexibility perspective," said
Dr...

...undertaken as part of the Autonomous Navigation and
Sensing Experimental Research (ANSER) programme - a three-year R&D
programme that follows more than 10 years' collaboration between BAE
Systems and the ACFR, under Professor Hugh Durrant-Whyte.

The tests mark a critical milestone for the ANSER team, which aims
to create a 4-UAV testbed facility to further develop and
demonstrate decentralised data fusion technologies. Its success
highlights the important role Australia is playing in the
development of technologies applicable to UAVs. The ANSER team plans
further flight tests later this year.

In...

 5/3,K/29   (Item 1 from file: 608)
DIALOG(R)File 608:MCT Information Svc.
(c) 2010 MCT Information Svc. All rts. reserv.

547606   Story Number: 9884   (USE FORMAT 7 OR 9 FOR FULLTEXT)
CALIFORNIA COMPUTER SERVICE ROUNDS UP THE NEWS
David Hoye
Arizona Republic
Mar 15, 1997 03:14 E.T.
DOCUMENT TYPE: Newspaper   RECORD TYPE: Fulltext   LANGUAGE: English
WORD COUNT: 0899

...TEXT: Once installed, NewsCatcher does its thing by itself. You can go
about your computing business while NewsCatcher stands watch in the
background, collecting the latest information.
     AirMedia scans news and information sources on the Internet,
including Reuters and Knight-Ridder, and distributes the latest
information via its broadcast network.
     Whenever the pyramid near your PC receives an update from
AirMedia, a little icon flies across your screen to the NewsCatcher
task bar. Click on it to read the update, or wait for
several to collect, then read them in a handy "newspaper" view.
     The icons correspond to the type of information collected.
Dollar signs indicate business news, a hot- air balloon indicates
entertainment news and so forth.
     There's also a "remote control" feature that looks...

5/3,K/30   (Item 1 from file: 609)

00899965 BKJGKKC (USE FORMAT 7 FOR FULLTEXT)
FULL: Virage unveils ControlCenter, video management product (B)
BRIDGENEWS GLOBAL MARKETS
Monday, September 11, 2000 11:12 GMT
JOURNAL CODE: MAR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 1,236

...remotely controls and automates the SmartEncode(TM)
process of simultaneous video capture, encoding and indexing for multiple
VideoLogger applications. ControlCenter provides centralized, remote
control
over content coming into each VideoLogger. By managing multiple
VideoLoggers
concurrently, ControlCenter builds enormous efficiencies into the video
streaming media workflow. ControlCenter allows users to scale their
VideoLogger environment without adding overhead. ControlCenter has been
engineered to allow maximum orchestration of mission-critical events with
minimal online navigation. Single-point administration allows immediate
access
and control of a network of VideoLogger activity with the click
of a mouse.
    ControlCenter provides complete flexibility in scheduling events. Users
can orchestrate one or more events on multiple VideoLoggers and specify
detailed properties for each session. Variable timeline views show the
availability of VideoLogger resources at any time. Built to accommodate
real
life workflow variations, ControlCenter delivers maximum automation,
flexibility and control.

    Proactive, Real-Time Status Monitoring
    The ControlCenter interface provides a wealth of information at a
glance.
Video capture thumbnails display incoming feeds in real time and instantly
reveal the status of any VideoLogger across the network. The Calendar...

5/3,K/31   (Item 1 from file: 610)

00838816 20030121021B7330 (USE FORMAT 7 FOR FULLTEXT)
Schlumberger Announces Fourth Quarter and Full Year 2002 Results
Business Wire
Tuesday, January 21, 2003 20:03 EST
JOURNAL CODE: BW LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 3,696

...sequential revenue declines across most of the GeoMarkets, India and

Saudi Arabia posted solid double-digit revenue growth as a result of strong
marine seismic activity in India, and increased well completions
sales in
Saudi Arabia.

Weak marine seismic activity in Malaysia/Brunei/Philippines and China
was
primarily responsible for lower revenues in these countries and the
sequential
decrease in pretax operating income.

The award of a five-year artificial lift contract for 91 wells
highlighted the
increasing demand for well completions services in Saudi Arabia in the
quarter. This penetration of the offshore artificial lift market
represented
an important milestone for the GeoMarket.

Highlights:

-- Launched LivingModel(TM) workflow through the acquisition of
Technoguide
AS, developer of the industry-leading Petrel(TM) Workflow Tools.
LivingModel
combines Petrel software with Schlumberger expertise in seismic and
simulation
to significantly accelerate the seismic-to-simulation workflow. LivingModel
is
a complete asset...

...management. --
Commercialized the Magnetic Resonance Fluid* (MRF) technique building on
the
Schlumberger leadership position in downhole magnetic resonance
measurements
and interpretations. The technique integrates downhole data
acquisition and
wellsite inversion with a multi-fluid response model to determine fluid
saturations, volumes and oil viscosities. -- Launched ProVISION* real-time
reservoir steering logging...

 5/3,K/32   (Item 1 from file: 613)
DIALOG(R)File 613:PR Newswire
(c) 2010 PR Newswire Association Inc. All rts. reserv.

00573108 20010515SFTU015 (USE FORMAT 7 FOR FULLTEXT)
Onyx Announces Promising Phase II Clinical Results for CI-1042 (Onyx-015)
As 'Mouthwash' for Premalignant Oral Dysplasia
PR Newswire
Tuesday, May 15, 2001 06:30 EDT
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 621

...clinical trial for head and neck cancer and in Phase I and II

clinical trials for a number of different additional cancer indications.
For
more information about CI-1042 and Onyx's pipeline and activities,
visit
Onyx's web site at www.onyx-pharm.com.

   This press release contains forward-looking...

...risks and uncertainties. Actual events may differ from the company's
expectations. In addition to matters described in this press release, the
timeline for clinical activity, results of pending or future clinical
trials
and changes in the status of the company's collaborative
relationships, as
well as the risk factors listed from time to time in the company's periodic
reports with the Securities and Exchange Commission, including but not
limited
to its Annual Report in Form 10-K, may affect the actual results achieved
by
the company.

                MAKE YOUR OPINION COUNT - Click Here
           http://tbutton.prnewswire.com/prn/11690X33016759

SOURCE Onyx Pharmaceuticals, Inc.
CONTACT: Helen Kim, 510-262-8737, or Betsy Rosenberg, 415-221-6044, both of
...

 5/3,K/33   (Item 2 from file: 613)
DIALOG(R)File 613:PR Newswire
(c) 2010 PR Newswire Association Inc. All rts. reserv.

00571963 20010514SFM103 (USE FORMAT 7 FOR FULLTEXT)
Onyx Reports Progress with Its Lead Compound, CI-1042 (Onyx-015), in Phase
I/II Clinical Development with Hepatic Artery Infusion in Colorectal Cancer
Liver Metastases
PR Newswire
Monday, May 14, 2001 06:30 EDT
JOURNAL CODE: PR LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 786

...clinical trial for head and neck cancer and in Phase I and II
clinical trials for a number of different additional cancer indications.
For
more information about CI-1042 and Onyx's pipeline and activities,
visit
Onyx's web site at www.onyx-pharm.com.

   This press release contains forward-looking...

...risks and uncertainties. Actual events may differ from the company's
expectations. In addition to matters described in this press release, the
timeline for clinical activity, results of pending or future clinical
trials

and changes in the status of the company's collaborative
relationships, as
well as the risk factors listed from time to time in the company's periodic
reports with the Securities and Exchange Commission, including but not
limited
to its Annual Report in Form 10-K, may affect the actual results achieved
by
the company.

                    MAKE YOUR OPINION COUNT - Click Here
               http://tbutton.prnewswire.com/prn/11690X63869930

SOURCE Onyx Pharmaceuticals, Inc.
CONTACT: Helen Kimof Onyx, 510-262-8737, or Betsy Rosenberg, 415-221-6044,
for...

5/3,K/35   (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2010 Gale/Cengage. All rts. reserv.

03693617   Supplier Number: 47968043   (USE FORMAT 7 FOR FULLTEXT)
MCAFEE: McAfee axtends leadership with new Helpdesk release
M2 Presswire, pN/A
Sept 9, 1997
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 899

...   resolution functionality.
     Ease-of-Use Enhancements McAfee HelpDesk 3.3 features a variety of
user-suggested enhancements designed to facilitate more efficient caller
management. Caller activity windows have been redesigned to provide
more intuitive workflow. The new interface also allows helpdesk
operators to conduct quick searches from within an open ticket, enabling
them to quickly locate relevant details about a caller's history and
status without slowing down the call process.
     The EZ SQL Edition of MHD 3.3 also features the new EZ-DB Wizard. This
point-and-click wizard greatly simplifies SQL database management. It
provides fully automated database installation, refresh, backup, restore
and administration functionality in a non-technical, Q&A wizard...

 5/3,K/36   (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2010 Gale/Cengage. All rts. reserv.

03357567   Supplier Number: 46905746   (USE FORMAT 7 FOR FULLTEXT)
LOTUS: Domino.Merchant transforms a web site into a powerful selling engine
M2 Presswire, pN/A
Nov 20, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 888

...   management reporting.

Leveraging the Power of the Domino Server Domino.Merchant is based on Domino and Domino.Action. The Domino Web server provides interactive communications, collaboration and workflow to create Web applications. Domino.Action works with Domino to provide a solution for easily creating and deploying innovative and content-rich Web sites. Domino.Merchant enables companies to go beyond a basic Internet storefront and leverage the data collected from their commerce site. Through Domino.Merchant's point-and-click user interface, companies will be able to:
    * create product catalogs with multimedia content,
    * update catalog and pricing information in a multi-user setting,
    * track sales activity via built-in reports,
    * host customer feedback and suggestion forums,
    * build workflow applications to support fulfillment of the products sold.
    In addition, Domino.Merchant will create a sophisticated commerce platform for Lotus Business Partners and third-parties...

5/3,K/37   (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2010 Gale/Cengage. All rts. reserv.

03073386   Supplier Number: 46279596 (USE FORMAT 7 FOR FULLTEXT)
NOVELL: GroupWise WorkFlow increases the efficiency of work processes
M2 Presswire, pN/A
April 3, 1996
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 695

...   Memphis Tennessee. "The integration of GroupWise WorkFlow with the Universal In Box finally gives our customers a compelling reason to implement a workflow solution."
    "GroupWise WorkFlow is an absolute world-beater of a product," said Connie Moore, director, Giga Information Group, a leading Information Technology Advisory Group. "When we look back two years from now, the GroupWise WorkFlow introduction will be a defining moment in developing workflow for the mass market."
    Creating a Workflow
    Jointly developed with FileNet Corporation, GroupWise WorkFlow enables GroupWise users to become workflow authors. With its point-and-click user interface, GroupWise WorkFlow makes constructing a workflow as simple as dragging icons, which represent people and objects in the system, to the WorkFlow Canvas and drawing arrows to link these icons in sequential, broadcast or conditional routes.
    The GroupWise address book allows workflow authors to assign people to each workflow step. With each step in the work process, the author can include detailed instructions, attach documents and objects required to complete the task, define specific responses and establish security levels for each participant. Once a workflow is implemented, the author can receive the status of the work in process, which shows exactly who has the work and what they've done with it.
    Participating in a WorkFlow